

U. S. C.
BUSINESS ADMINISTRATION
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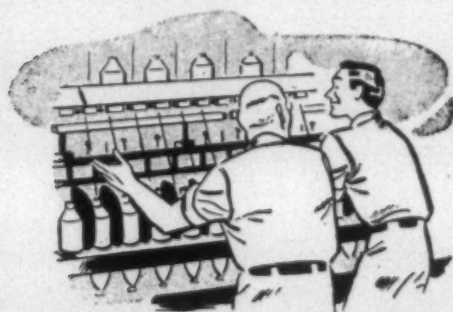
Textile

bulletin

APRIL • 1935

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You can spin better yarn at lower cost with
ORR'S New, Improved

CLEARER CLOTH

in two types —

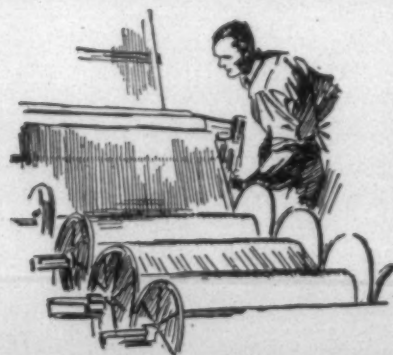
78% Wool & 22% Cotton, or 25 oz. & 30 oz. All Wool

In either type, you get the highest quality
clearer cloth money can buy.

The new ORR CLEARER CLOTH is a worthy
companion to Orr's All Wool, chemically treated

SLASHER CLOTH

whose quality has made it the choice of
so many successful Southern Mills



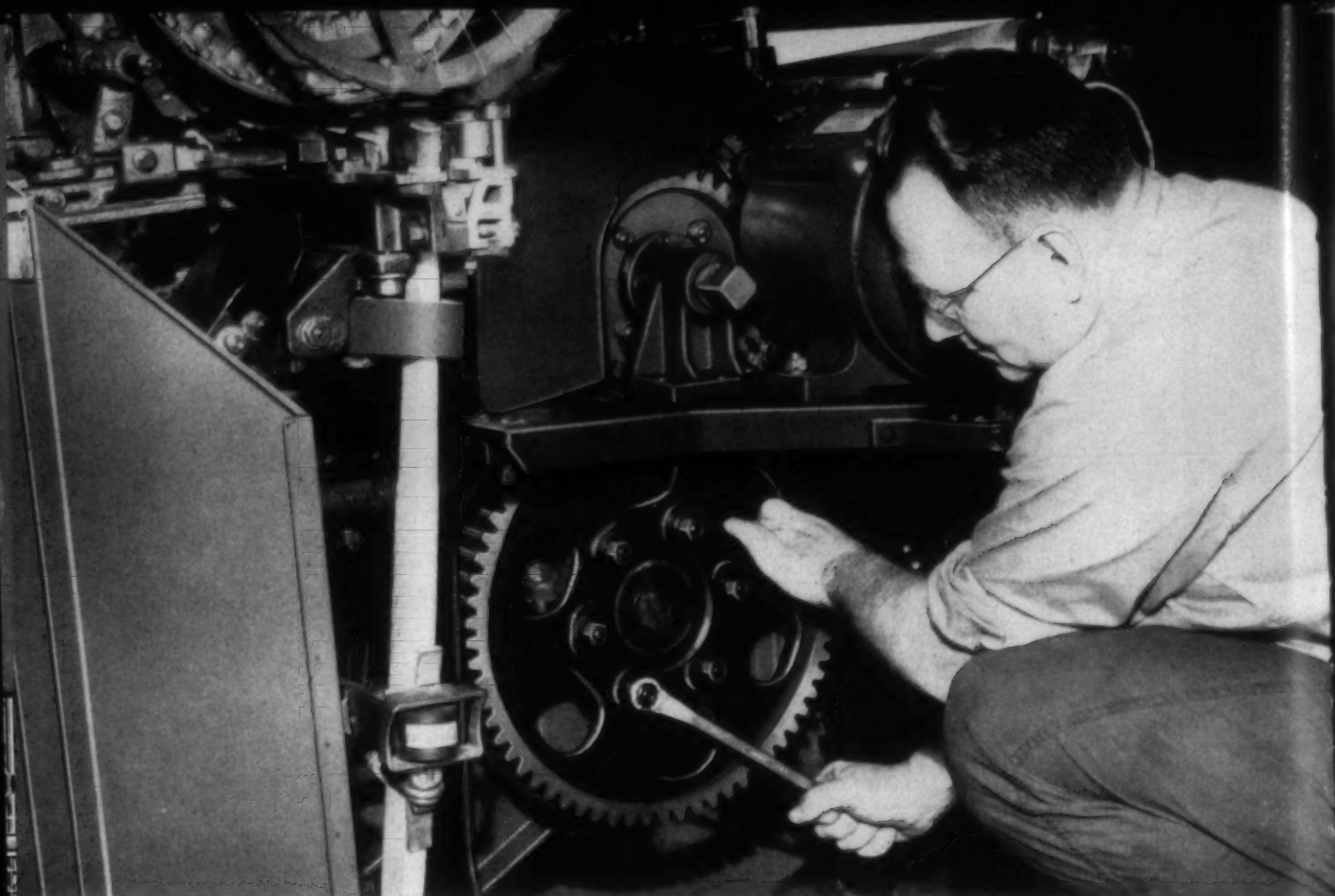
For Full Particulars and Samples Write Our Southern Agent

THE BULLETIN is published
monthly by Clark Publishing
Co., 218 West Morehead St.,
Charlotte 7, N.C. Subscription
price, \$1.00 per year in advance, \$3.00
for three years. Entered as
second-class mail matter
March 2, 1911, at Postoffice,
Charlotte, N.C., under Act
of Congress, March 2, 1897.



THE ORR FACT & FINANCIAL CO., PITCOA, OHIO

JOHN B. LAMON, INC., 718 NORTH ROAD, CHARLOTTE 7, N.C.



HERE IS A LABOR SAVING PRODUCT

. . . this is evident when you compare these photos. The new Cam Shaft Gear and Hub assembly illustrated is just one of many new Draper constructions, designed to *lower costs and increase profits.*

It is this continued effort to "make it better", that has made Draper products the accepted standard in leading mills through-out the world.

Save time and money by using the *right repairs* on Draper looms . . . Draper repairs.



DRAPER CORPORATION

HOPEDALE, MASSACHUSETTS

ATLANTA, GA.

GREENSBORO, N. C.

SPARTANBURG, S. C.

SONOCO CONES

A right cone—a right surface for every type yarn! Throughout the years, SONOCO has conducted unending research and development with resulting industry-wide benefits. SONOCO cones are available with various surfaces, inside and outside printing, notches, scores, perforations and in many engineered nose and tip designs. Lacquer tipping, dyed base and tip, and striped base can be furnished for yarn identification.

*Standard of
the World!*

SONOCO PRODUCTS COMPANY

MAIN OFFICE—HARTSVILLE, S. C.
MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT. LOWELL, MASS.
PHILADELPHIA, PA. AKRON, IND. GARWOOD, N.J. GRANBY, QUEBEC
MEXICO: Sonoco de México, S. A., Apartado 10239, México, D. F.

DEPENDABLE SOURCE OF SUPPLY



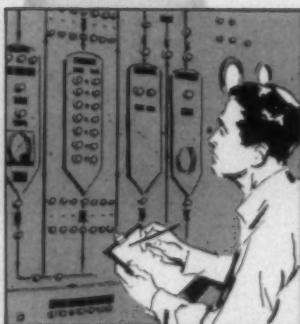


GLOBE® pearl corn starch gives you all this...



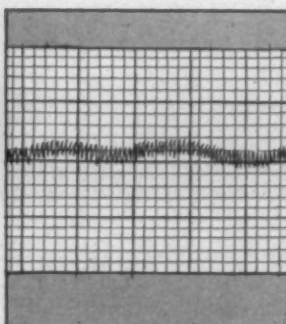
A SUPERBLY CLEAN PEARL STARCH

Put Globe Brand Pearl Corn Starch to the test. We know you'll be happy with the clean, clear size it makes. Globe Pearl Corn Starch is always available in the quantities you desire.



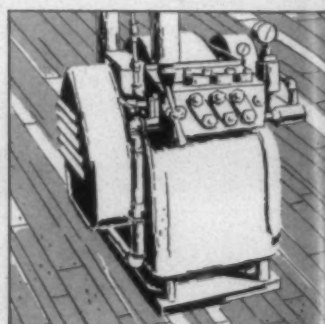
CONTROLLED UNIFORMITY

Globe Brand Pearl Corn Starch is made under exacting plant and laboratory controls. Each batch will meet your exacting specifications. This thick-boiling starch is ideal for warp sizing carded yarns.



VISCOSITY STABILITY

Globe Brand Pearl Corn Starch performs perfectly in the sizebox, producing a smoother, tougher size, giving a yarn with greater strength and reduced shedding.



IDEAL FOR HOMOGENIZERS

A special Globe Brand Pearl Corn Starch has been developed for homogenizers. It homogenizes to a uniform end-product, clean and stable, making a size that produces a better sized warp.



- Take advantage of our free technical and laboratory service. Send your specific production problems to us. We welcome the opportunity to serve you.

Corn Products Refining Company • 17 Battery Place, New York 4, N. Y.

The Picker Lap

COTTON YARN IS BUILT

The modern spinning mill with its long bobbins, and long drafts, MUST HAVE GOOD COTTON LIVER.

The only way to get good cotton liver is to make good picker lap—well mixed and with very little foreign material.

A weak and picky, with a lot of trash, will not make good yarn.

The best and quickest way to get cotton in perfect condition is to have ALDRICH pickers. If you wish to overhaul the pickers at the mill, all needed parts can be had from ALDRICH.

THE ALDRICH SYSTEM OF PICKING COTTON



**Aldrich Machine
Works**

Greenwood, South Carolina

**SMALL
CARRIER...**

**HANDLES
BIG LOAD**

...naturally it's

AMERICAN MONORAIL

This American MonoRail Monotractor unit, recently installed in a rug and carpet warehouse, dispatches hard to handle, big bulky loads over a wide area. Fully automatic, with finger-tip control, with a hoist capacity of 1,000 pounds, this installation is **SAVING 200 MAN HOURS PER WEEK.**

This is another of the many examples of American MonoRail engineering for low-cost, efficient overhead handling. Let your American MonoRail representative explain the versatility, low cost and low maintenance of American MonoRail equipment. Consultation in connection with any handling problem is available without obligation.



AMERICAN

OVERHEAD
HANDLING
EQUIPMENT

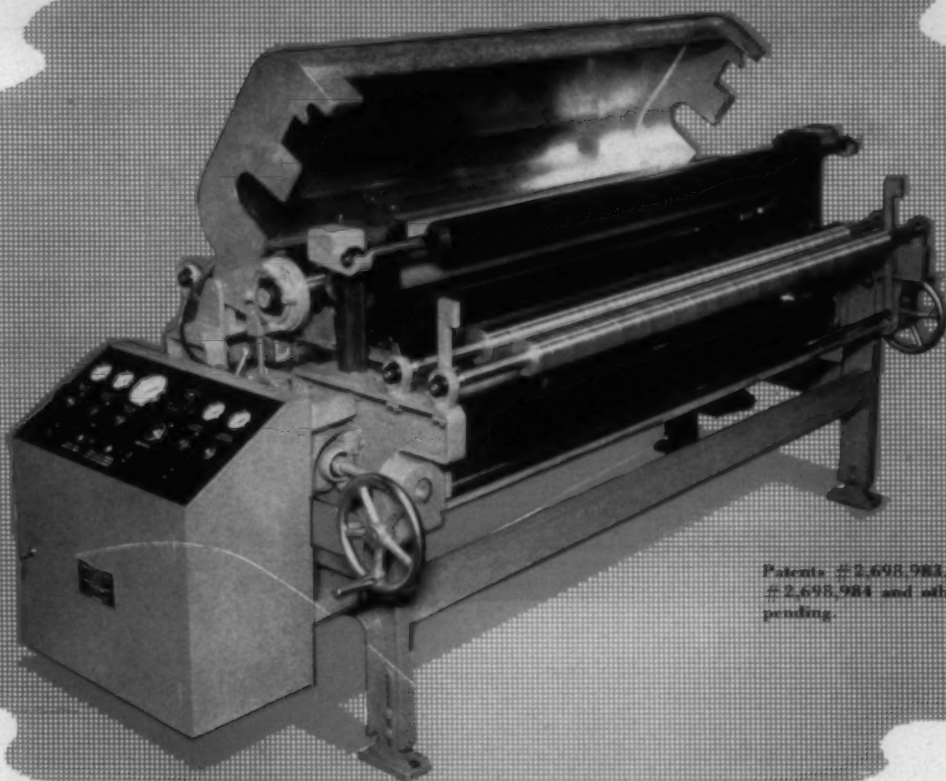
MonoRail COMPANY

13121 ATHENS AVENUE • CLEVELAND 7, OHIO

[IN CANADA—CANADIAN MONORAIL CO., LTD., GALT, ONT.]

FACTORY PROVED!

GRIFFIN SIZE APPLICATORS



Patents #2,698,983,
#2,698,984 and others
pending.

30 DAY TRIAL INCREASES SLASHER PRODUCTION 25 PER CENT!

In this exacting factory test extensive checks were made daily on a Griffin Size Applicator equipped slasher. Size pick-up was more constant, yarn had a better feel to it, there were fewer ends out of lease, and yarn from the slasher ran more efficiently in the weave room.

Streamlined aluminum cover fits directly over size mixture on the Applicator and eliminates most of

the steam for better working conditions. Rubber rolls and modern control panel are other features of the Griffin Size Applicator which make this the *First Improvement in Controlled Sizing!*

Run this 30-day trial in your plant for the most convincing proof of increased slasher production and higher loom efficiency with the Griffin Size Applicator!

IRA L. GRIFFIN & SONS

P. O. BOX 1576

CHARLOTTE, N. C.



NALEX ensures excellent weaving efficiency at relative humidities as low as 70%. Often even lower.

NALEX dyes quickly. A minimum of size compound is needed. Film forming properties are excellent.

NALEX penetrates readily, which is necessary for combed yarns and high sley constructions.

NALEX minimizes "seconds" by eliminating "hard size, warp clinging, fuzz balls," etc. High quality fabrics can be produced week after week.

LOW HUMIDITY means better working conditions, lower maintenance costs, and a cleaner weave room.

STARCHES



RESYNS®

National Starch Products Inc., 270 Madison Ave., New York 16, N. Y. • Atlanta • Boston • Philadelphia
In Canada: National Adhesives (Canada) Ltd., Montreal

No. 6 in a series explaining

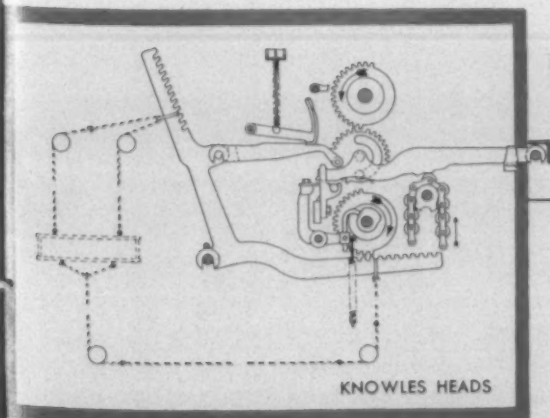
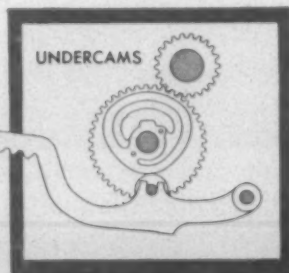
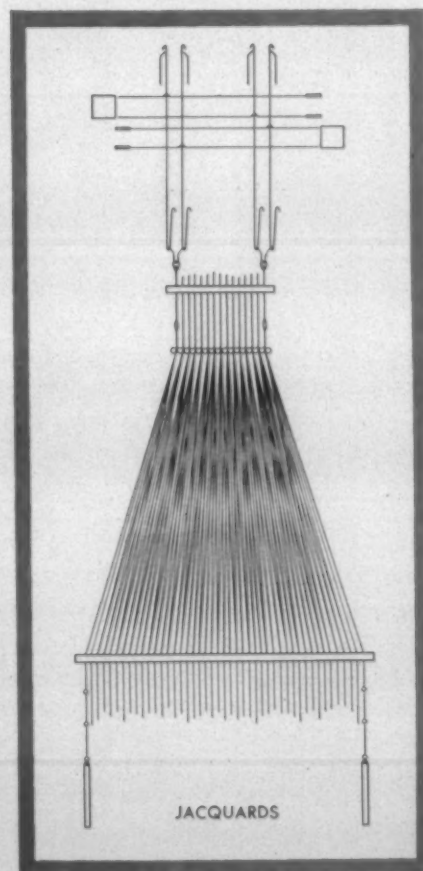
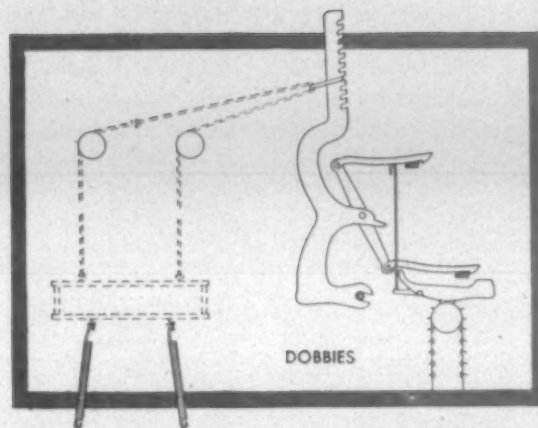
Why C&K's New **M**ulti-**P**urpose Looms mean **M**ore **P**rofit to any mill

**NOW . . . for the first time
. . . M-P Makes Possible
a choice of 4
SHEDDING MECHANISMS
. . . on the same
Basic Loom-Frame**

Whichever of these four mechanisms is chosen now, it may be converted later if changing fashion requirements make it necessary.

Here is your range of choice: From the simplest *Undercam* harness motion for 2, 3, 4, 5 or 6 harness work . . . through *Dobbies* with their smooth action for easily fractured filament or other tender yarns, and with capacity up to 25 harness, with high-speed operation . . . and also newly developed 20 and 25 harness *Knowles Head* motions with their distinctive positive shedding . . . to modern high-speed *Jacquards* of French, Fine or Vincenzi index, with 104 to 2640-hook capacity for the ultimate in decorative effects.

This range of choice is sound insurance for you. So see C&K today, for the M-P Looms exactly suited to your needs.



Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Charlotte, N. C. • Philadelphia, Pa. • Allentown, Pa.
Crompton & Knowles Jacquard & Supply Co., Providence, R. I.
Crompton & Knowles of Canada Limited, Montreal, Quebec

SMOOTH
AS
OIL

HARD
AS
GLASS

DURABLE
AS
GRANITE

NEW
Robbinette*
SPINNING RINGS
BY
SACO-LOWELL

ANOTHER FIRST — THE RESULT OF SACO-LOWELL RESEARCH

This new Robbinette* Ring has a finish which is the result of many years of cooperative research between Saco-Lowell technicians and the steel manufacturing industry. Testing and trial run reports show that its all-around performance is far superior to that of any other spinning ring.

This Saco-Lowell Robbinette* Ring is suitable for

*A product of the Pawtucket Spinning Ring Company, the Ring Department of Saco-Lowell Shops.

cotton, wool, paper, glass and all synthetic fibers and blends. Robbinette* Rings break in rapidly and easily — and once in operation, they increase the life of the traveler and decrease the number of ends down per MSH.

Robbinette* Finish is now standard on all of our rings for both spinning and twisting without extra cost.



SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD and SACO, MAINE; and SANFORD, N. C.

SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA



FOR SALES IMPACT

Uninhibited Colors!

Merchandising axiom:
Colors that go beyond past
conceptions put sought-after
individuality into fabrics!

Any color effects your stylists
conceive, we can translate into
practical working formulas for
production runs. Month after
month, we have been adding new
colors to our line, expanding
application laboratory facilities,
re-aligning local-office operations,
streamlining our warehouse and
delivery services. Right now, we can
serve you better than ever before.

When buying dyes, weigh all
the values you receive. Remember—
no dyestuffs manufacturer can
offer more and better service
than National Aniline—few can
offer as much. It pays to call
National Aniline first!

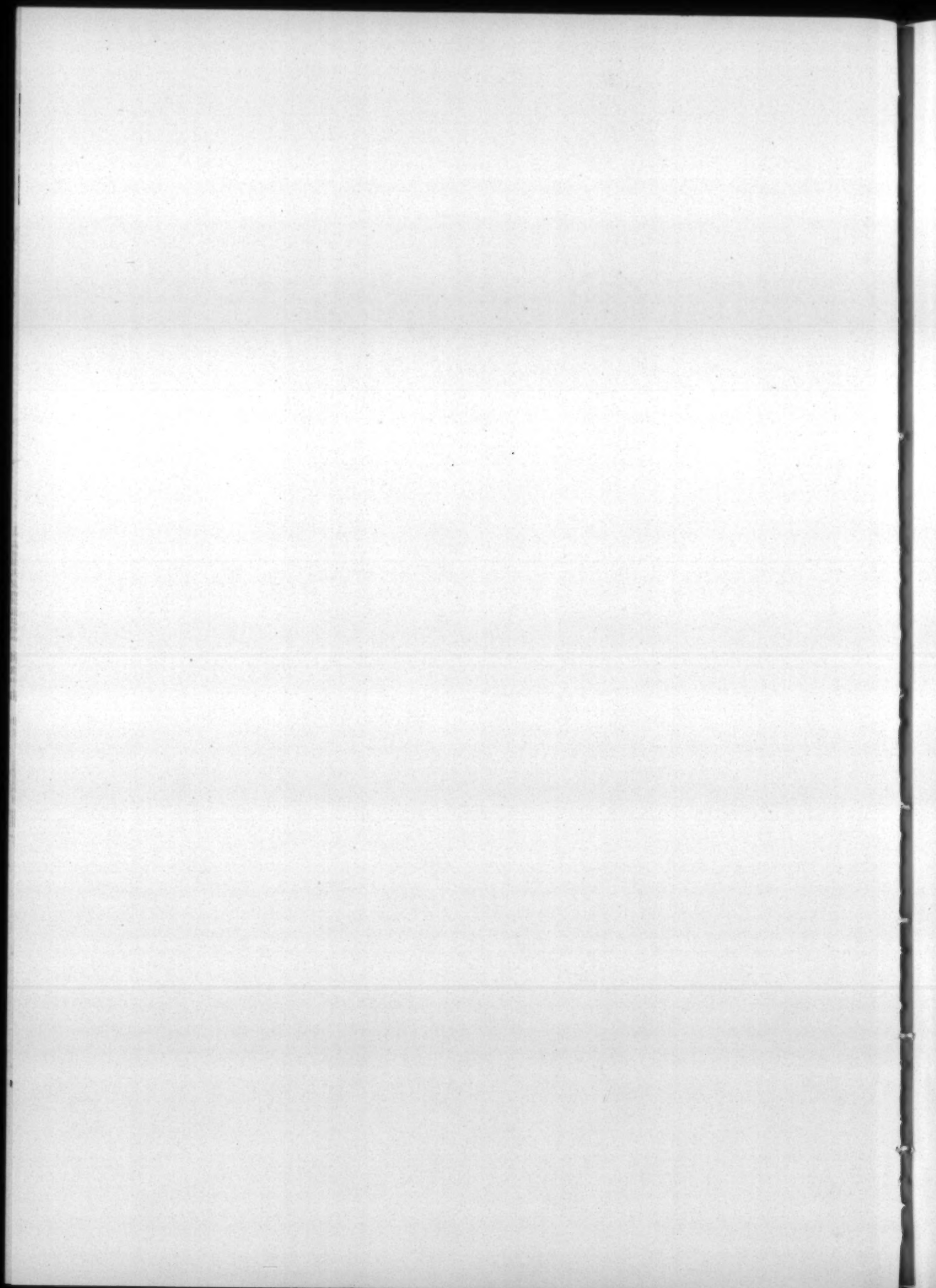
National Aniline Dyes



NATIONAL ANILINE DIVISION ALLIED CHEMICAL & DYE CORPORATION • 40 RECTOR ST. NEW YORK 6, N. Y.
Boston Providence Philadelphia Chicago San Francisco Portland, Ore. Greensboro Charlotte Richmond Atlanta Los Angeles Columbus, Ga. New Orleans Chattanooga Toronto

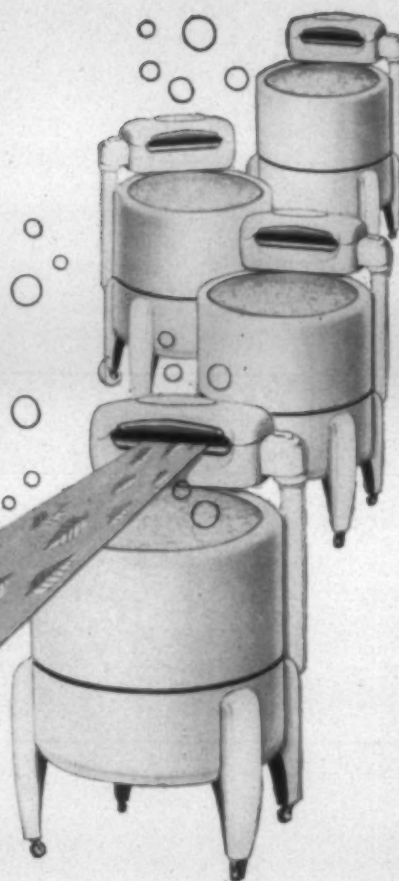


V. C. Collection / TMC-Cat Library



**CRUSH-RESISTANT, WRINKLE-DEFYING
COTTONS THAT MANY WASHINGS
WON'T DISCOURAGE—YOURS WITH**

RHONITE R-1*



Our wise little owl knows that cotton dress goods (or rayons or blended fabrics) become wonderfully wrinkle-resistant when treated with RHONITE R-1. Even repeated washings won't take away their fresh, springy beauty.

RHONITE R-1 treated fabrics can be calender-finished for a wide range of effects—from friction to deep embossed, from plain to moiré.

***RHONITE R-1** is another dependable chemical product for the textile industry made by the makers of LYKOPON.

CHEMICALS

FOR INDUSTRY

**ROHM & HAAS
COMPANY**

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

RHONITE and LYKOPON are trade-marks, Reg. U.S. Pat. Off. and in principal foreign countries.

3 DAYTON PRODUCTS DESIGNED TO

Step up

Get smoother, safer checking, reduced wear and higher loom production with Dayton Thorobred Loop



You'll handle your share of the new, profitable textile business with dispatch by equipping your looms with these 3 Dayton products scientifically designed to cut maintenance costs, improve output. Look at these money-saving features:

Dayton Thorobred Loop Pickers, for example, cut costs in many mills as much as 25 to 50%. That's because they're built to take the tremendous poundings of high speed shuttles. Tilted construction gives them a decided advantage because it assures perfect shuttle contact every time. Flaired bottom and tapered picker hole permit easy, accurate seating without tearing of loop ply. Made as a single unit, there's nothing to break or expand when picker is driven on stick. A narrow back provides non-wear feature on lay end strap.

Most revolutionary of all textile products, Dayton ThoroCheck Check Straps offer real economy and service. Typical of their performance Dayton Check Straps, in test on X-2 looms, have seen round-the-clock service, 5 days a week, for over 9 months without visible signs of wear. Under similar conditions other straps lasted only 2 to 3 months. The savings on replacement alone paid for the installation of Dayton ThoroCheck Endless Check Straps. Because they are unaffected by moisture or humidity, they need practically no adjustment. This means higher production, more productive hours for your looms when equipped with Dayton ThoroCheck Endless Check Straps.

Dayton Thorobred Deluxe Lug Straps are specially constructed in one piece, with built-in molded plug, to cushion the shock of jarring picking thrusts. Easy to apply, Dayton Lug Straps have no permanent stretch when installed and are so designed as to offer less abrasive action on picker stick and hold-up strap. In addition, Dayton Lug Straps are unaffected by temperature and humidity and they resist oils and greases. In tests, Dayton Thorobred Deluxe Lug Straps have averaged twice the service life of any other strap on the market.

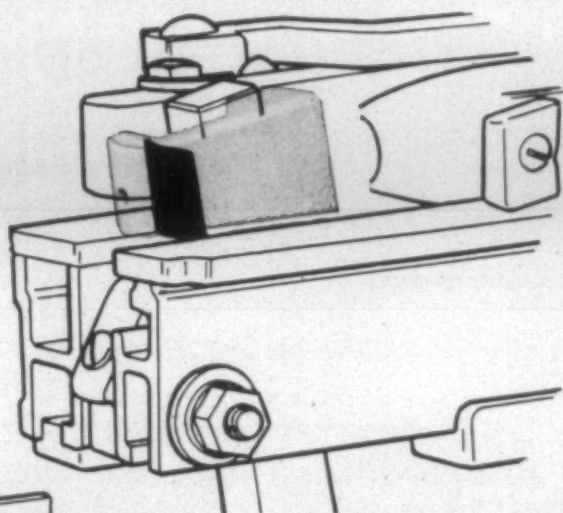
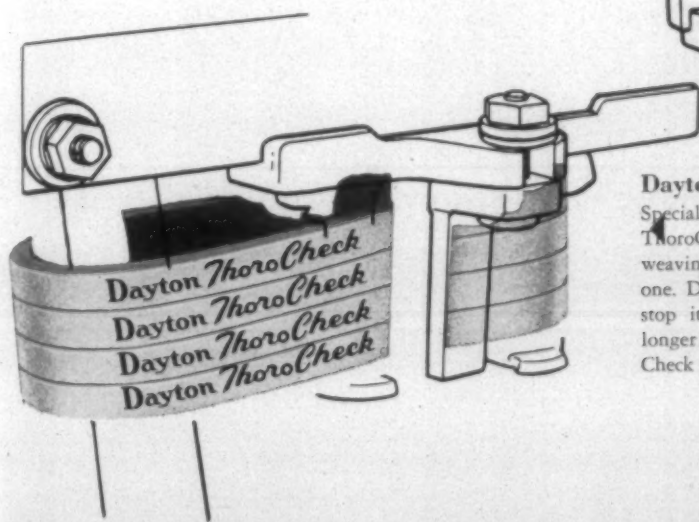
Put them all together and you've got an unbeatable combination that will outperform all other similar products on the market. For full capacity operation in your weaving room—equip throughout with synthetic rubber Dayton Loop Pickers, Check Straps and Lug Straps.

Weaving Room Efficiency

Pickers, Dayton ThoroCheck Endless Check Straps and Dayton Thorobred Deluxe Lug Straps.

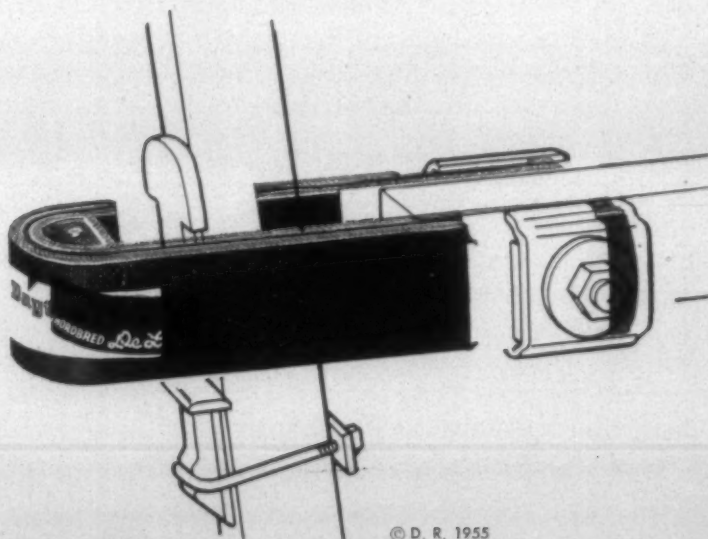
Dayton ThoroCheck Loop Pickers

Made of a specially woven fabric Dayton Pickers are built to stand up for long periods under the poundings of high-speed shuttles. Exterior roughness has been reduced to a minimum to prevent hanging filling and lint pick-up. Dayton's are always uniform in size . . . cut picker cost 50%, seat easily on picker stick and offer perfect shuttle contact at all times.



Dayton ThoroCheck Endless Check Straps

Specially designed and built to exacting standards Dayton ThoroCheck Check Straps save important time and money in weaving operations . . . outlast other check straps 2 & 3 to one. Daytons check more smoothly, eliminate drag over stick, stop it with a graduated braking action. Result: less wear, longer life and lower replacement costs with Dayton ThoroCheck Endless Check Straps.



Dayton Thorobred Deluxe Lug Straps

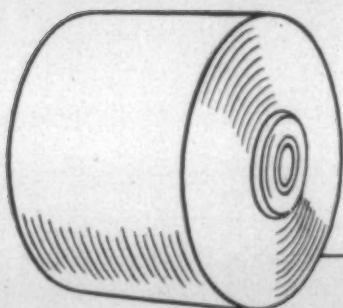
Built in 1 piece with molded plug to cushion picker thrusts, Dayton Lug Straps have no rivets or other parts to work loose. Special longitudinal cord built into center of lug, in line with thrust, gives Daytons added strength, longer life . . . prevents jarring and protects costly loom parts. Easy to apply, Dayton Thorobred Deluxe Lug Straps last twice as long as other straps in actual test operations.

Get set now to keep looms running at capacity—equip throughout with Dayton Loop Pickers, Endless ThoroChecks and Deluxe Lug Straps. Your Dayton representative will be glad to give you complete details. Or write Dayton Rubber Co., Textile Div., Dept. 303, 401 S. C. National Bank Bldg., Greenville, S. C.

GOLDEN JUBILEE

Dayton Rubber
50 YEARS OF PROGRESS

© D. R. 1955



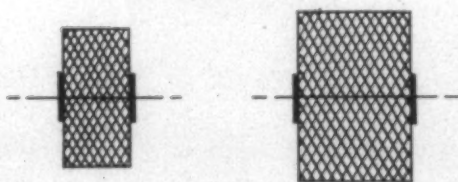
LARGE PACKAGES HAVE ADVANTAGES in the steps which FOLLOW THE SPINNING

SPINNING

12" Bobbin — 3" Ring — 12 oz. Bobbin
= 1.33 Bob/lb. — 15,000 Yds.
9" Bobbin — 2" Ring — 3.85 oz. Bobbin
= 4.16 Bob/lb. — 5,000 Yds.

3 TIMES As Much
Yardage On Bobbin

SPOOLING



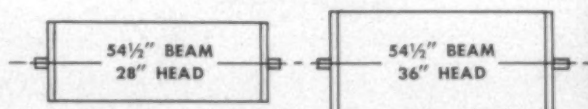
TYPE "C" CHEESE
2.38 LBS.
48,000 YDS.

TYPE "D" CHEESE
6.00 LBS.
120,000 YDS.

2.5 TIMES

AS MUCH YARDAGE PER CHEESE

WARPING



28" BEAM

36" BEAM

40" BEAM

530 LBS.
24,000 YDS.
445 ENDS

875 LBS.
40,000 YDS.
441 ENDS

1,050 LBS.
40,000 YDS.
529 ENDS

BEAMS
PER CHEESE

BEAMS
PER CHEESE

BEAMS
PER CHEESE

TYPE "C"-2
TYPE "D"-5

TYPE "C"-1
TYPE "D"-3

TYPE "C"-1
TYPE "D"-3

SLASHING

Assuming 1,200 yds. per Loom Beam

28" BEAM

36" BEAM

40" BEAM

20 Loom Beams
Per Set

33 Loom Beams
Per Set

39 Loom Beams
Per Set

Average Slasher Creelings per 120-hr. Week

5.68

3.67

3.16

TWISTING

2.38 LB.
CHEESE

6.00 LB.
CHEESE

48,000

120,000

YDS. PER CHEESE

YDS. PER CHEESE

2.5 TIMES

AS MANY BOBBINS CAN BE TWISTED
PER CREELING

Note: 24s Yarn Assumed in All Comparisons

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY
ROCKFORD • ILLINOIS • U. S. A.

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GREENVILLE, S. C., U. S. A.

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3-Chome Kitahama Higashiku
Osaka, Japan

YOUR REED and COMB REQUIREMENTS are ...

**NEVER
A PROBLEM...**



... *For* **Stehedco**

STEEL HEDDLE MFG. CO., has the engineering know-how and facilities to produce any reed or comb no matter how special your needs may be. In addition the largest stock of dent wire and spring wire insures quick delivery.

STEEL HEDDLE MFG. CO., is the originator of Ultra (100% Stainless Steel) Broad Silk Reeds, furnished with flat bands, as illustrated, or tubes over bands. Hard Chrome plating is

available and recommended for maximum wear resistance.

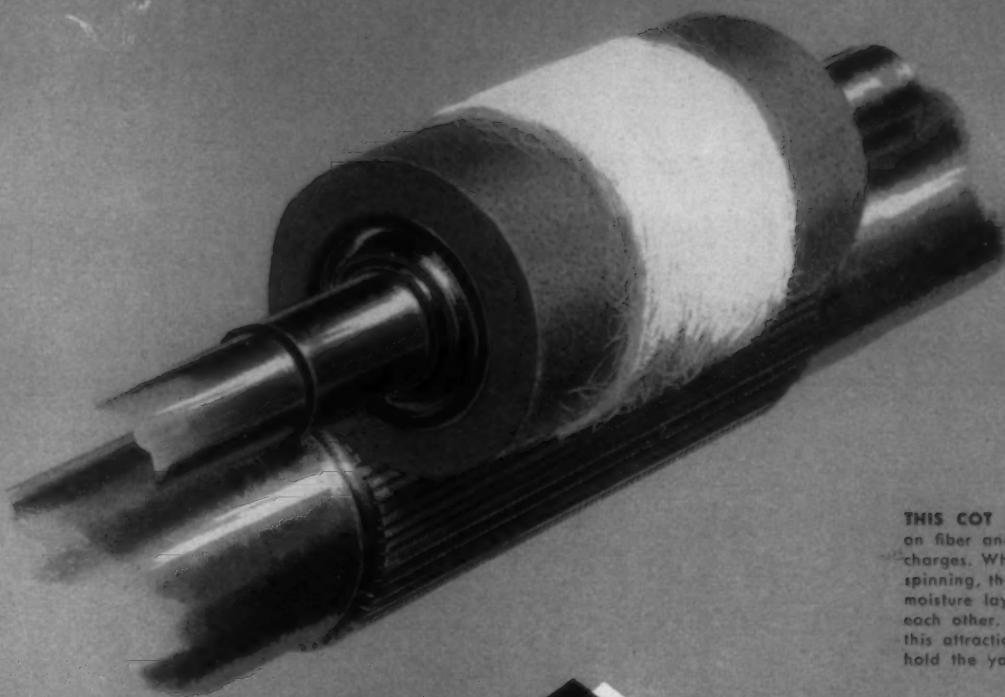
STEHEDCO service plants are centrally located in every major textile area. . . . In Canada, New England, Middle Atlantic and Southern States. More than half a century of experience assures you of the best in quality and workmanship. *Contact our local office for further information.*

Stehedco and Southern
WORLD FAMOUS TRADE MARKS OF THE
Steel Heddle
Mfg. Co.

STEEL HEDDLE MFG. CO., 2100 W. Allegheny Ave., Phila. 32, Pa
SOUTHERN SHUTTLES Paris Plant... Greenville, S. C.
A Division of STEEL HEDDLE MFG. CO.

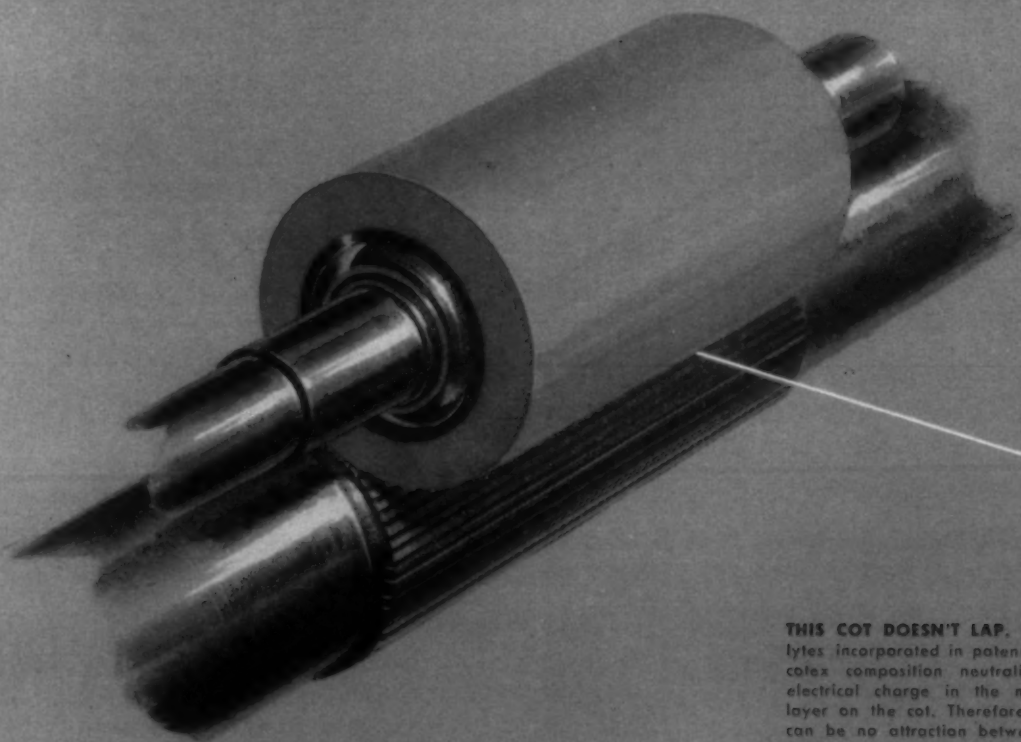
STEEL HEDDLE COMPANY OF CANADA, LIMITED
310 St. Hubert Street • Granby, Quebec, Canada

Other Plants and Offices: Greenville, S. C. • Atlanta, Ga. • Greensboro, N. C. • Providence, R. I.
Textile Supply Co., Dallas, Texas • Albert R. Breen, Chicago, Ill.

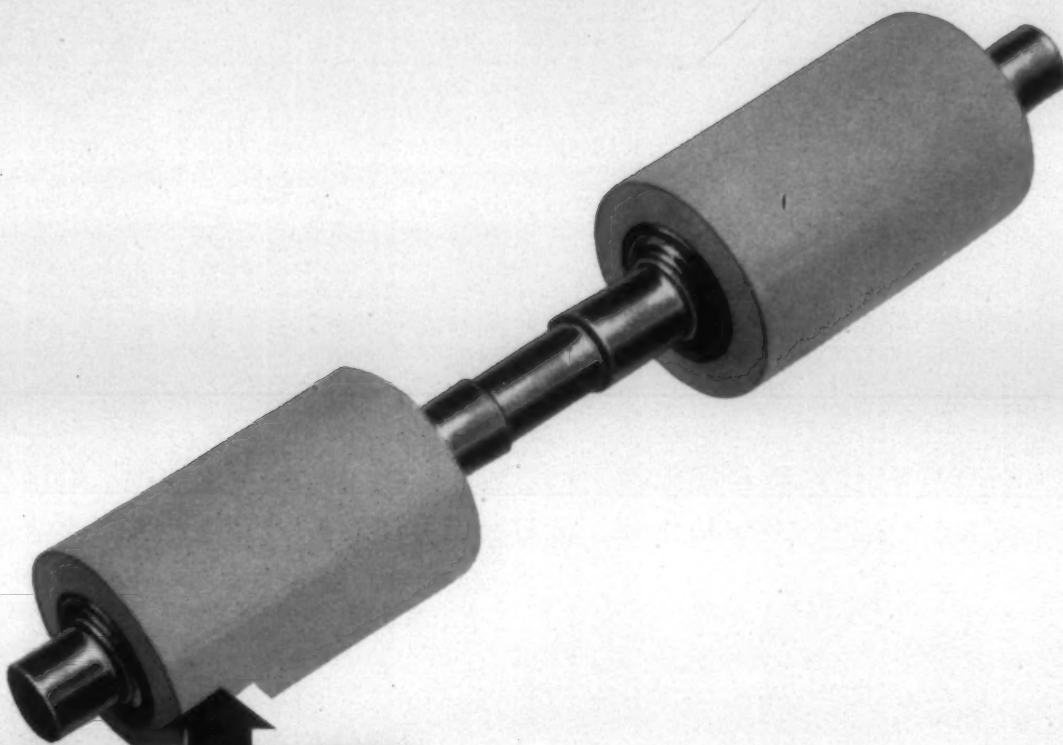


THIS COT LAPS. Moisture layers on fiber and cot contain electrical charges. When pressed together in spinning, these electrically charged moisture layers tend to adhere to each other. When an end breaks, this attraction is strong enough to hold the yarn and cause lapping.

the difference between this...and this.....



THIS COT DOESN'T LAP. Electrolytes incorporated in patented Accotex composition neutralize the electrical charge in the moisture layer on the cot. Therefore, there can be no attraction between the moisture layers and no tendency for fiber to lap up onto the top roll.



.....is this!

ARMSTRONG J-490 ACCOTEX® COTS HAVE BUILT-IN LAP RESISTANCE

One of the best ways to prevent lapping of synthetic fibers—or any type fiber with revolving clearers—is to equip your frames with Armstrong J-490 Accotex Cots.

This roll cover is made of patented synthetic rubber compound that eliminates a basic cause of lapping. Special electrolytes in the rubber neutralize normal electrical attraction between cover and fiber. As a result, J-490 Cots actually tend to *repel* broken ends.

Good fiber control. The J-490 compound offers other important spinning advantages, too. Because it contains no rough fillers, its drafting surface is always uniformly smooth. This roll cover won't pull fibers from the stock or cause excessive ends down.

An exceptionally clean-running cover, J-490 gives good fiber control over long periods of service. It's never affected by oils, dyes, or commonly used textile solvents. In fact, all

that's needed to keep this cot spinning like new for years is an occasional re-buffing.

You can prove how long-wearing J-490 Accotex Cots help prevent lapping and improve yarn quality by running a few test sides of these cots. Your Armstrong representative will be glad to arrange this test. Call him today or write direct to Armstrong.

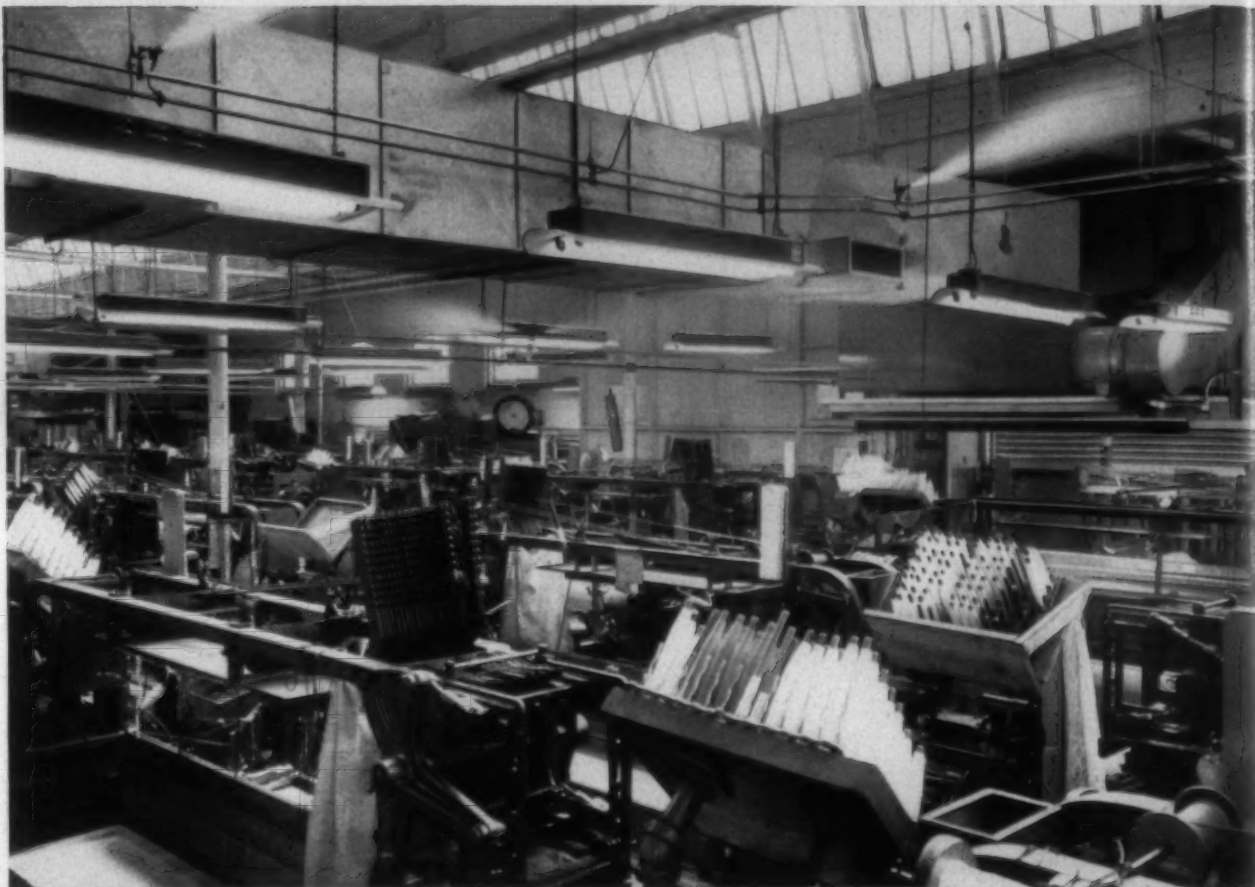
Is eyebrowing a problem in spinning?

Armstrong NO-742-S Accotex Cots with the "constant-friction" surface pack waste well back under the clearers and prevent eyebrows from forming.

Send for free booklet. Armstrong "Textile Roll Coverings and Mill Supplies" gives suggestions on selection, installation, maintenance of Armstrong textile products. Write to Armstrong Cork Company, Industrial Division, 6504 Davis Avenue, Lancaster, Penna.



Armstrong ACCOTEX COTS
... used wherever performance counts



Unit Dry-Duct System installed at Rhode Island Fabrics Company, Pawtucket, Rhode Island

PROFIT'S IN THE AIR

... with AMCO Unit Dry-Duct Air Conditioning

In a textile mill, reliable, efficient air conditioning can be a big factor in the profit picture. When floor space is at a premium, a central station installation may be out of the question. Faced with this problem, many mills have found a profitable answer in the Amco Unit Dry-Duct System.

This system consists of a self-contained air conditioning unit, distribution ducts and room atomizers. The air conditioning unit itself is compact and can be installed overhead, out of the way, where it will not take up valuable mill floor space.

Automatically operated louvers supply fresh air and recirculated air, in proper proportions, to the air conditioning unit. The air is filtered if desired, and then heated as required. This "dry" air is distributed to the working area through ducts. Humidification and evaporative cooling are provided by atomizers located in front of each air duct. Automatic controls hold relative humidity and temperature at the desired levels. Spent air and heat are exhausted automatically through vent louvers.

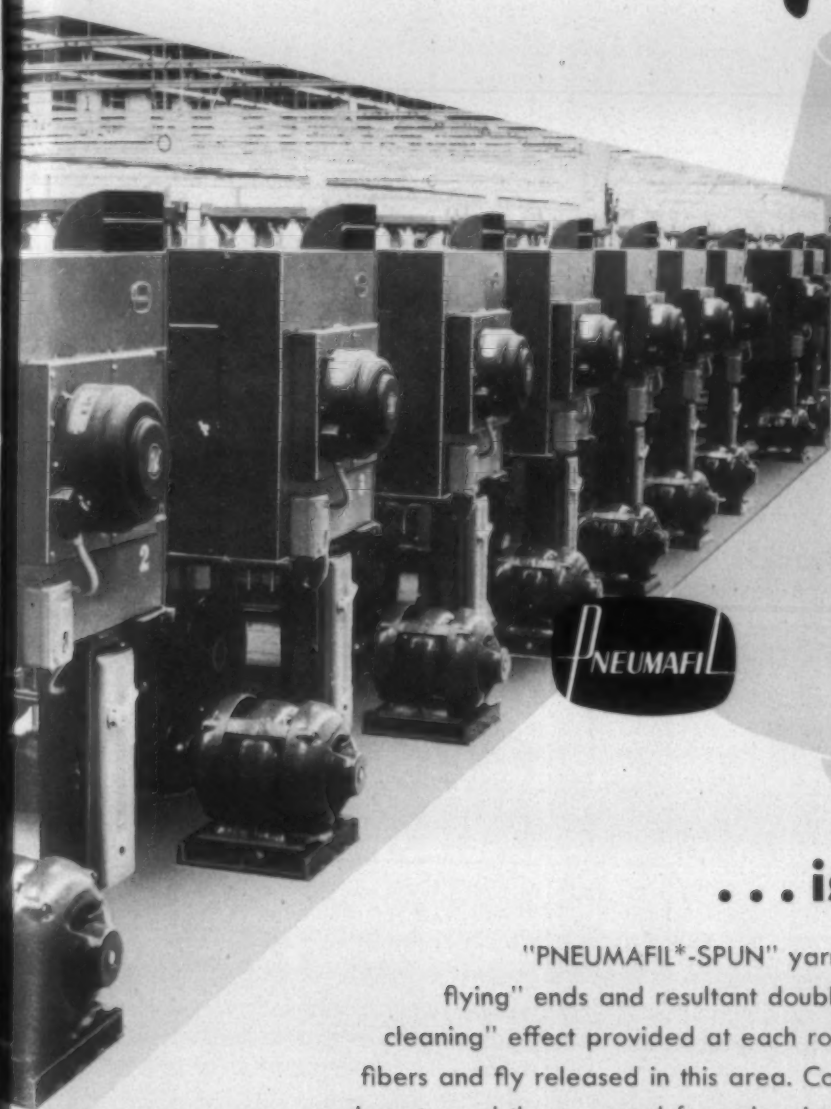
The Unit Dry-Duct System is only one of the many types of air-conditioning systems manufactured, engineered, and installed by Amco. The facts about textile mill air conditioning — the advantages and disadvantages of each type of system — are fully covered in Amco's booklet "Air Conditioning for the Textile Industry." Write today for your own copy of this Amco booklet.

AMCO

AIR CONDITIONING SYSTEMS since 1888

AMERICAN MOISTENING COMPANY, PROVIDENCE, R. I. • ATLANTA • BOSTON • CAMDEN • CHARLOTTE • AFFILIATED WITH GRINNELL COMPANY, INC.

"PNEUMAFIL*-SPUN"



... is easier to sell

"PNEUMAFIL*-SPUN" yarn is better quality yarn. "Wild or flying" ends and resultant doublings are eliminated. The "vacuum cleaning" effect provided at each roll boss collects practically all free fibers and fly released in this area. Consequently, there are fewer slubs and gouts, and those caused from cleaning conventional scavenger rolls are eliminated. When Pneumafil* waste is re-run, it is not necessary to use a waste machine which results in more even yarn with greater strengths.

Weavers and knitters know "Pneumafil*-Spun" yarn weaves and knits better, resulting in higher quality fabrics... that is why...

"PNEUMAFIL*-SPUN" yarn is easier to sell...

PNEUMAFIL CORPORATION

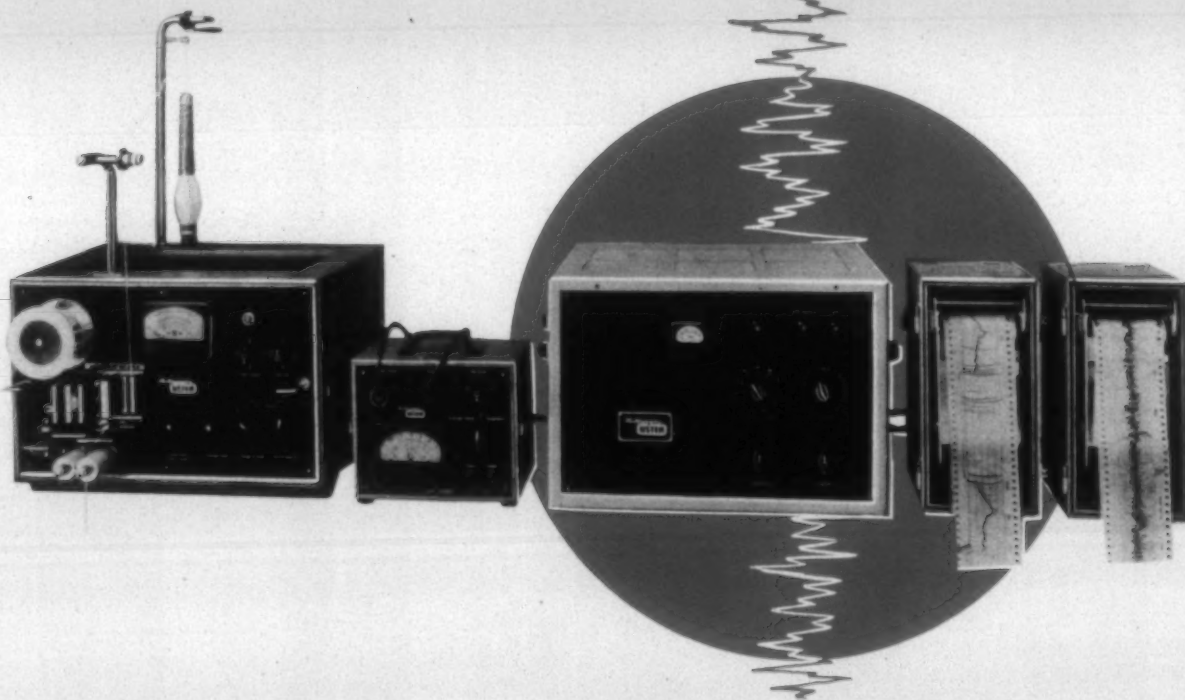
CHARLOTTE 8, NORTH CAROLINA

Sales Offices: Needham Heights, Massachusetts—Atlanta

*Reg. U.S. Pat. Off.
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THE SPECTROGRAPH

Another **USTER** First



THE NEW USTER SPECTROGRAPH . . .

(for direct use with the Uster Evenness Tester). Accurately indicates process causing unevenness from yarn tests alone! . . . Takes the guesswork out of chart evaluation! . . . Multiplies the value of evenness testing many times over! . . . A practical tool that almost thinks! . . . THE SPECTROGRAPH . . . ANOTHER USTER FIRST.

Controlling every operation in the mill from picker lap to finished yarn is . . . simpler . . . easier . . . and quicker . . . with the Uster Universal Evenness Tester and its companion instruments . . .

- Linear Integrator
 - Quadratic Integrator
 - Sliver Lap Adapter
 - Lap Varimeter
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- ★ And Now "The Spectrograph"! . . .

. . . Another reason to buy Uster

USTER CORPORATION

CHARLOTTE 8, NORTH CAROLINA

Sales Offices: Needham Hts., Mass.—Decatur, Georgia

In Canada: Hugh Williams & Co., 47 Colborne St., Toronto, Ontario

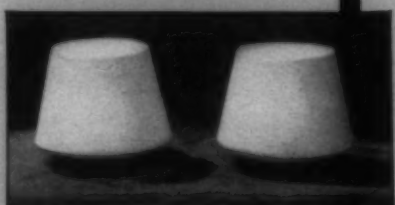
FOSTER MODEL 202 AUTOMATIC CONE WINDER

*The Only
Automatic Machine
Which Produces*
**CONES
SUITABLE FOR
KNITTING**

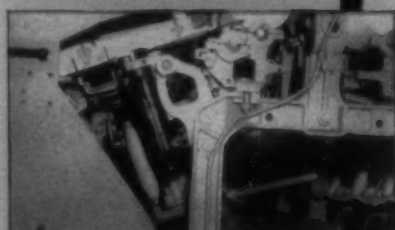
**SEE IT
IN OPERATION**



... at
Knitting Arts Exhibition
Booths 82-84 and 99-101A



MODEL 102 and MODEL 202
CONES — IDENTICAL



FULL BOBBIN MOVING INTO
SUPPLY POSITION—EMPTY
BOBBIN BEING DOFFED



AUTOMATIC BOBBIN SORTER

The knitting cones (6" traverse and 8½" dia.) produced on this machine are identical in quality to those produced on the Foster Model 102, which has set the standard for the knitting industry for many years.

This machine increases production per hour per operator by 100% to 300% (depending on the kind and count of yarn), compared with modern, non-automatic machines.

It decreases operating costs proportionately, making it practical to replace non-automatic winders.

Only duties of operator are to drop full bobbin in a chute and catch the end in a clip in one single motion, don and doff cones and thread up. Everything else is automatic including tying in of broken ends, doffing of bobbins and sorting of empty and partially filled bobbins.

If you can't see this machine at the Knitting Arts Exhibition, do the next best thing. Send for Bulletin A-100 which gives the complete story. No obligations.

FOSTER MACHINE COMPANY **A Winder for Every Textile Purpose**

Westfield, Massachusetts, U.S.A.

Southern Office—Johnston Bldg., Charlotte, N. C. • Canadian Representative—Ross Whitehead & Company, Limited, 1475 Mountain St., Montreal, Que., and 35-37 King St., West, Toronto, Ont. • European Representative—Muschamp Textile Machinery, Limited, Keb. Lane, Bardsley, Oldham, England.



It Swings

This Ideal Coiler Tube Mechanism swings lightly and freely by means of a ball-bearing at the top, instead of dragging heavily on the spectacle surface. It will run silently at any speed you wish to attain.

Never Needs Oil or Grease

Because the bottom of this Ideal Coiler Tube Mechanism is suspended above the spectacle surface, it never needs oil or grease. Neither does the ball-bearing, which is permanently sealed and

lubricated. It is impossible to cause oil spots with this mechanism.

Eliminates Static

The Ideal Coiler Tube Mechanism is made entirely of phenolic fibre which never generates static. This feature alone is of tremendous value to mills which draft synthetics or blends.

This new mechanism is available for cards, drawing, and combers . . . for all size cans. Get full information about it today.

*Patents Pending

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Bessemer City, N. C.**

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*Keep a
good spare
handy!*



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BTM HARNESS CHANGE GEAR. Has special split feature for fast and easy installation.	BTM CHANGE GEARS. Precision cut teeth give smoother pick motion and longer service.	BTM PARALLEL. Finest quality cast iron. Machine finished for long service.
		
IDLE GEAR ASSEMBLY with stud collars, washers and brass bushing. Alemite fitting.	BTM CAM SHAFT GEAR with precision machine cut teeth. Gives outstanding service.	CLOTH ROLL GEAR and WORM. Steel hardened and ground bore. Lasts the life of the loom.
		
SPRING CRANK ARM complete with 58938 Crank pin (replacement) for Wood Crank arms.	BTM PICK CAM HUB. Malleable iron bored with shims for clamp fit. Split for easy installation.	BTM CRANK SHAFT GEAR, a machine cut gear that is split (or Batex) for easy installation.
		
BTM CRANK SHAFT GEAR, cast saw tooth. Split type for faster change.	BTM TREADLE ROLL, ball bearing. Long wearing, smooth running. Lessens fire hazard.	FILLING CAM FOLLOWER HUB BUSHING. Two piece. Made of hardened and ground steel.
		
BTM CHANGE GEAR STUD, with brass bushing. — with 76790 brass bushing.	BTM PARALLEL TONGUE, hardened and ground for smooth, trouble-free action and long wear.	BTM PARALLEL SHOES. These shoes have lips that provide true alignment and parallel.

CHECK YOUR NEEDS . . . ORDER TODAY!

The need of some critical part can disrupt your entire production schedule . . . Don't be caught short . . . Bahan can make immediate shipment of these and other Bahan loom parts. Keep your parts supply complete.

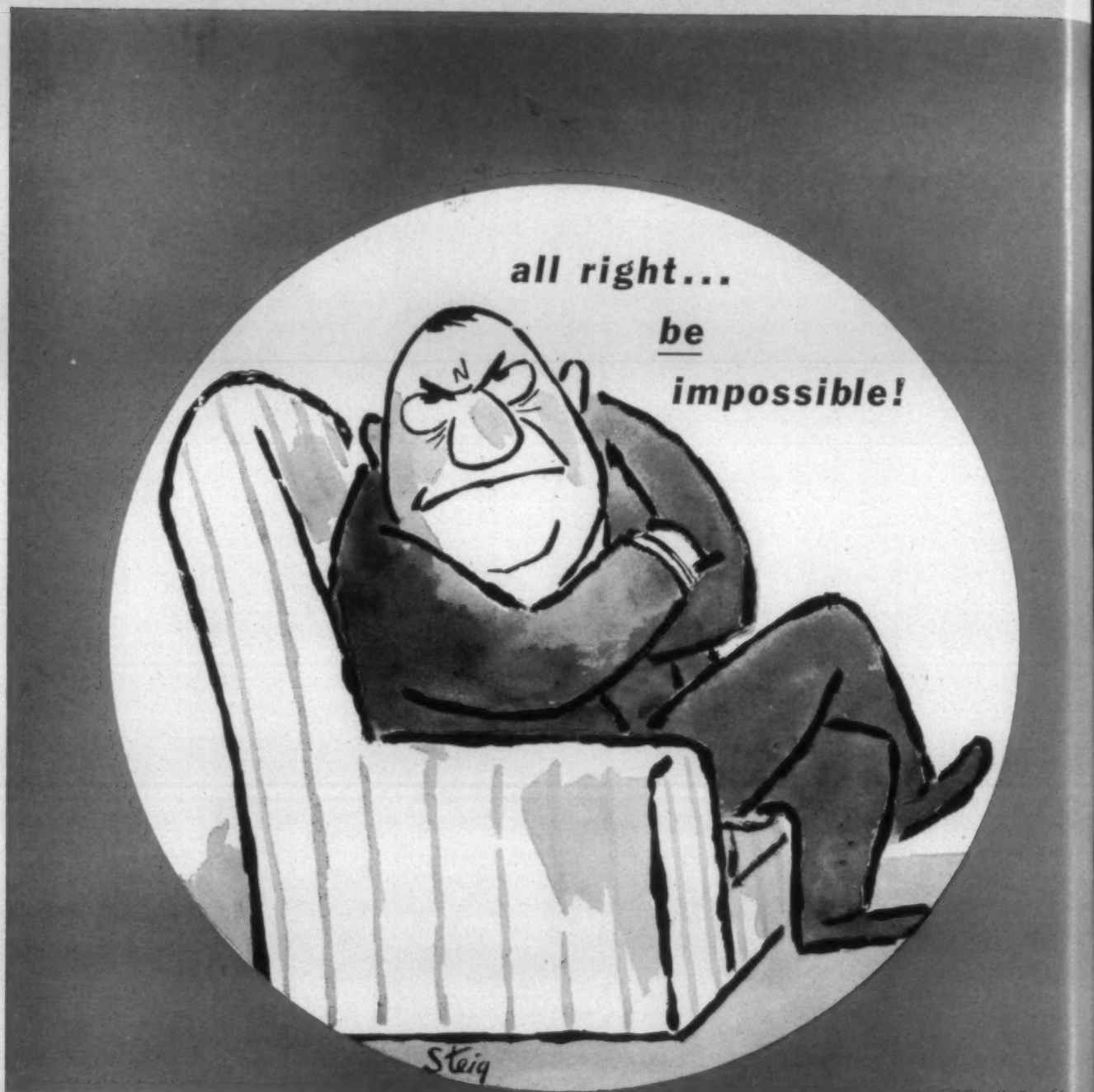
The BTM Stamping is Your Assurance of Dependable Loom Parts.



BAHAN TEXTILE MACHINERY CO.

INCORPORATED

GREENVILLE, SOUTH CAROLINA



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**THE
NEW**

Nylon

Staple

FROM HERE ON IN, the odds are with you that with the seven distinctive features of the NEW Nylon Staple by IRC you can achieve ideas for new products...or product improvements...that you never thought would work.

For this is an entirely new kind of Nylon Staple...with a new brighter-than-bright luster that creates sheen without shine...a new crimp that can come up with new effects...it dyes quicker, deeper, with more absorbency. You can get new resistance to abrasion with it, better spring-back, new strength with finer yarns. All adding up to greater economy and higher quality for you.

And you can expect the NEW Nylon Staple by IRC to give you the same cost-cutting uniformity and performance that industry has come to expect of IRC rayon yarns.

... BRING NEW PRODUCTS TO LIFE!

- NEW LUSTER • NEW DYEABILITY
- NEW CRIMP • NEW ABRASION CHARACTERISTICS
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SERRATED HOOKS
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Eliminate troublesome
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HOLDUPS
Designed to meet
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CLOTH ROLL BLOCKS
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SWEEPSTICKS
Streamlined
for balance
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Outlast fiber and
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THE BULLARD CLARK COMPANY



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DIVISION**
Charlotte, N. C.

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DIVISION**
Danielson, Conn.

He "Roughs It" in the "Cloth of Kings"

Corduroy—Once Royalty's Favorite— Belongs to Everyone Today

Long before Caesar, the Gauls had worked out a twill pattern in weaving. Later was developed the rich, ribbed fabric so favored by the French Court it was called cord-du-roi, or cloth of kings.

Today corduroy belongs to everyone—and is as much valued for its ruggedness as for its beauty. Thanks to modern textile manufacturing methods, corduroy can be woven to meet virtually every need. Used for coats, dresses, sports clothes, draperies, upholstery material—it is an outstanding example of textile manufacturing progress.

Exactly right for today's textile requirements are Staley's sizing and finishing starches. Scientifically formulated to give you the exact weight and uniformity you need, Staley's starches insure you better, more economical results. For more information, write today.



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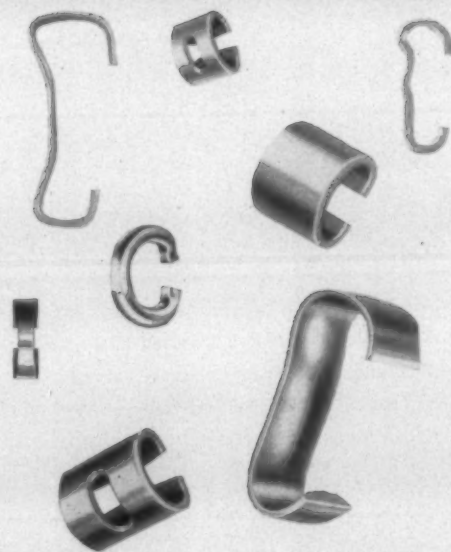
A. E. Staley Manufacturing Company, Decatur, Illinois



**There's a
right traveler
for every job!**

When selecting travelers, you can usually get the very traveler you need by taking advantage of National's long, specialized experience. From our line of over 18,000 different sizes, weights, and styles, we can supply travelers promptly for most requirements and, when necessary, design special travelers for your particular needs. Our staff of engineers is at your service at all times and will gladly make recommendations to perfect your spinning and twisting.

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FOR SPINNING AND TWISTING ALL NATURAL AND SYNTHETIC FIBRES





CARDING IS THE FOUNDATION FOR QUALITY

NO. 16

Tips on Card Cylinder Bearings

Many mills have experimented with, and are still experimenting with, various types of reworked cylinder bearings, ball bearing cylinder bearings, and "bargain" cylinder bearings. We, as a service organization to operators of carding machines, very strongly recommend that all card cylinder replacement bearings be exactly like the bearings with which your cards were originally equipped. Such identical bearings can be obtained from the card builders or from nationally known bronze bearing manufacturers.

Within the last twelve years, much has been said about metal inserts for worn-out bronze cylinder bearings. These are a poor substitute; and due to the nature of the metal, poor assembly, and inferior machine work, we know of no mill that has not experienced difficulty with such reworked bearings. In fact, where large installations have been made, it has cost thousands of dollars in card clothing replacements and other thousands of dollars in "re-drawing raised or blistered cylinder fillets." The following is a summary of mill experiences with cards equipped with cylinder bearings containing metal inserts:

1. Difficulty in centering cylinder between frame sides.
2. Extreme difficulty in keeping card lined.
3. Only pin-point contact between shaft and reworked bearing; installation of insert under pressure causes distortion.
4. Distortion of outside diameter of old bronze bearing,

resulting in poor fit between mainstand and reworked bearing.

5. Hot bearings. Such reworked bearings invariably run hot, which no amount of lubrication can control. Hot bearings cause expansion of the cylinder, resulting in faced flats and faced cylinder fillets. Such contact eventually causes raised or blistered cylinder fillets, which have to be redrawn or replaced.

These tips may prevent damage to your cards:

1. All replacement bronze bearings should have a single or double figure eight (8) oil groove. These grooves are oil reservoirs and assure lubrication and prevent undue wear between bearing and shaft.
2. Avoid "bargain" bearings. Buy only from an established bearing manufacturer direct, or through concerns vitally interested in carding.
3. Some mills have applied ball bearing equipment to present card cylinders with no thought of the wear on cylinder shafts. Any forward-looking ball bearing manufacturer will insist on an especially ground cylinder shaft, held to very close tolerances, plus personal supervision of initial installation of ball bearing cylinder bearings. Most ball bearing cylinder bearing applications to date have failed prematurely because of poor fit between adapter and cylinder shaft. Any mill contemplating the installation of ball bearing equipment should have the job engineered by a ball bearing manufacturer working in conjunction with a card builder.

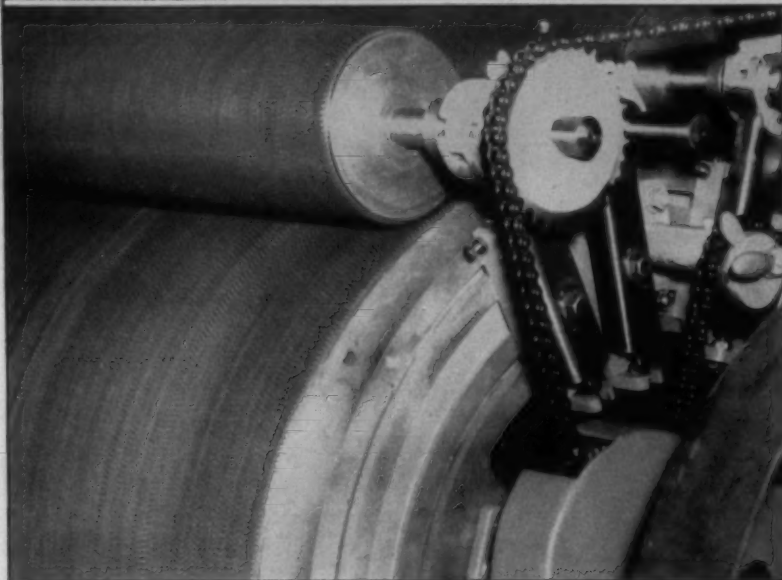
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please turn the page ▶

HAVE YOUR METALLIC ROLLS RECOVERED

By *Ashworth*

(Check with our nearest Plant before Shipping)



... AND OBTAIN

1. Better quality carding
2. Increased production
3. Longer card clothing life
4. Thus lower costs

This procedure is desirable when sending metallic rolls to us for recovering:—

1. State on purchase order the following information:

- a. Type and size of roll.
 - b. Number of points per linear inch and number of threads per inch desired.
 - c. Hardened point (not just blued — but really hard) or regular wire.
2. If metallic roll is sent in without wire, mark direction in which wire should point.
 3. When crating, the roll should be completely boxed (including shafts) and supported at each end as close to the heads as possible. Box should be made large enough to clear points of wire after roll is recovered.

WHAT YOU GET FOR YOUR MONEY

1. Shafts straightened and heads checked.
2. Shafts metal sprayed, if necessary.
3. Thickness of shell checked.
4. The best wire, both manufactured and installed, by Ashworth, to the closest tolerances.
5. Fast and reliable service.



ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

Fall River*†‡

Worcester‡

Philadelphia*†‡

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Greenville*†‡

Atlanta †‡

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(Textile Supply Co.)

Los Angeles 62, Calif. (E. G. Paules, Representative)

*Factory

†Repair Shop

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3 FACTORIES • 6 REPAIR SHOPS • 7 DISTRIBUTING POINTS



New...from DuPont: **"SEVRON"**^{®*} dyes
that give stay-bright colors to
"ORLON"[†] and **"ORLON"-WOOL** blends

Bright colors for "ORLON" and "ORLON"-wool blends keep their beauty with Du Pont "SEVRON" dyes. Developed *specifically* for "ORLON", these dyes give good light fastness and excellent wash fastness. Level dyeings in a wide range of colors mean bright shades may be duplicated easily from run to run.

A major advance in dyeing "ORLON" and other acrylic fibers, "SEVRON" dyes have a direct affinity for "ORLON" Type 42 fiber. You can apply them directly to stock, top, yarn and piece goods without using the copper method. They give excellent build-up in heavy shades, too. So specify "SEVRON" dyes by Du Pont the next time you dye "ORLON":

"SEVRON" Yellow L	"SEVRON" Blue B
"SEVRON" Yellow R	"SEVRON" Blue 2G
"SEVRON" Brilliant Red 4G	"SEVRON" Green B
"SEVRON" Red L	"SEVRON" Orange L

Let us work with you on your dyeing problems with any of the new fibers or blends of the new and old. For technical aid, simply write to E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Delaware.

* Trade-mark

† "ORLON" is Du Pont's trade-mark for its acrylic fiber.

Du Pont Dyes



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



Acrilan brings a new kind of luxury touch to sweaters and Jersey

A lot of knitwear thinking is being changed by Acrilan acrylic fiber. To sweaters it brings a new luxurious softness, warmth that's practically weightless, greater dimensional stability and less pilling. For jersey it offers a hand never before possible in a synthetic. In both cases Acrilan's easier dyeability permits a full range of rich, fresh colors... and Acrilan's performance outpaces any other fiber you've known. That's why before the year's end you'll be seeing knitwear of Acrilan in the wardrobes of all America.



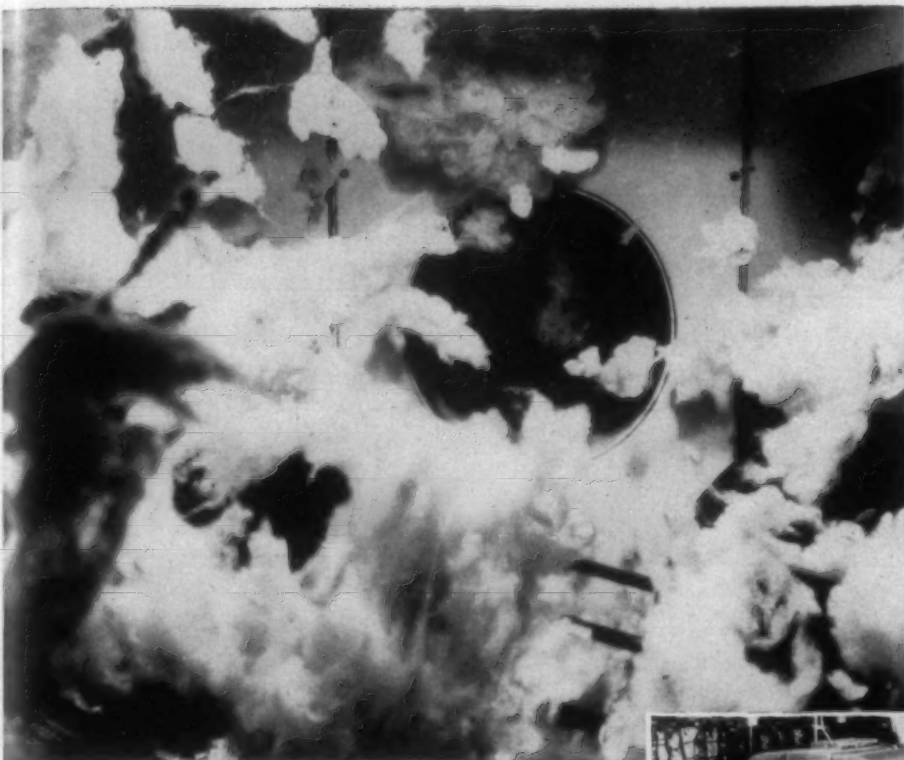
Acrilan... the sweater fiber for '55 • Acrilan... the Jersey all America's been waiting for!
(See the Chemstrand Exhibit, Knitting Arts Exhibition, Atlantic City, April 25-29, 1955)

THE CHEMSTRAND CORPORATION GENERAL SALES OFFICES: 350 FIFTH AVENUE, NEW YORK 1, N. Y.
PLANTS: ACRILAN® ACRYLIC FIBER — Decatur, Alabama; CHEMSTRAND NYLON — Pensacola, Florida
DISTRICT SALES OFFICES: 9 Rittenhouse Place, Ardmore, Pennsylvania • 4 Pearl Street, Dedham, Massachusetts • 222 South Church Street, Charlotte, North Carolina

CALLED "THE MOST IMPORTANT DEVELOPMENT IN OPENING AND CLEANING IN TWENTY YEARS"

**The new
WHITIN**

AXI-FEED and AXI-FLO



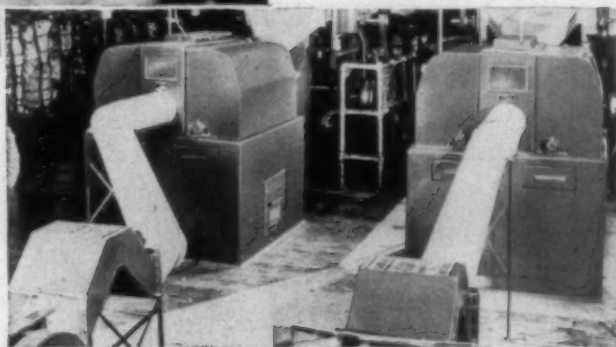
High speed photograph of interior of Whitin AXI-FLO showing cotton in process of being cleaned, further opened and blended. Note small size of tufts passing out through delivery pipe at rear.

Providing a new technique in opening and cleaning, installations of the Whitin AXI-FEED attachment for blending feeders and the Whitin AXI-FLO are now setting performance standards higher than were ever possible with conventional equipment. In addition to Opening Room benefits, many other advantages are being realized in subsequent processes because of the improved quality of the cleaned stock.

- **Better Opening**
Stock opened into very small tufts
- **Increased Cleaning**
Dirt removed equivalent to 2 or more conventional machines. Production up to 1200 lbs./hr.
- **Additional Blending**
Axi-Flo blends while cleaning
- **Yarn and cloth quality usually improved**
Preservation of long fibers beneficial
Neps greatly reduced

**are fast
making
conventional
opening
and
cleaning
methods
obsolete!**

Mill installation of two AXI-FLO units. Each is fed by a line of blending feeders.



- **Costs Sharply Reduced**
Present power costs reduced by 60-75%
Lower maintenance costs
Low investment required

Send for full details today!

Whitin

MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA.
SPARTANBURG, S. C. • DEXTER, ME.

Topic for Mill Management



Which one is best? The Utility Uptwister (left) has been used in many mills for many years. The Unirail® (right) is a new development — capable of extremely high speeds, producing a 2 lb. headless package. Your Utility or other old Uptwisters may well be the most efficient, economical



machines for the job they are doing. Or, replacement with Unirails for certain operations might bring you the economies and increased production you need to operate most profitably. Our Profit-Factor Study gives the answer, in facts and figures.

We help you find your profit factor

*Just what equipment do you need to
modernize for maximum profit?*

What is the best way to acquire it?

What about competition?

Obviously there is no quick valid answer to these questions. But there are answers. And Universal has set up its Profit Factor Study precisely to help you get the *right* answers.

This is a detailed, *confidential* study of a given mill's twisting and winding operation — including related operations — followed by a complete, expert analysis on how to make production more efficient, and profitable, wherever possible.

The Profit-Factor Study is supplemented by the Leesona Pay-As-You-Profit Plans, designed to help mills strengthen their competitive position while safe-guarding their capital and borrowing power. These plans provide for either long-term purchase or long-term lease of Leesona twisting and winding machinery.

This folder introduces you to the Leesona Double-Profit Service, including Profit Factor Studies and Pay-As-You-Profit Plans. Read how you may take advantage of either of its two valuable features — or combine both to profit two ways. A copy is yours for the asking.



23.4.29



UNIVERSAL WINDING COMPANY

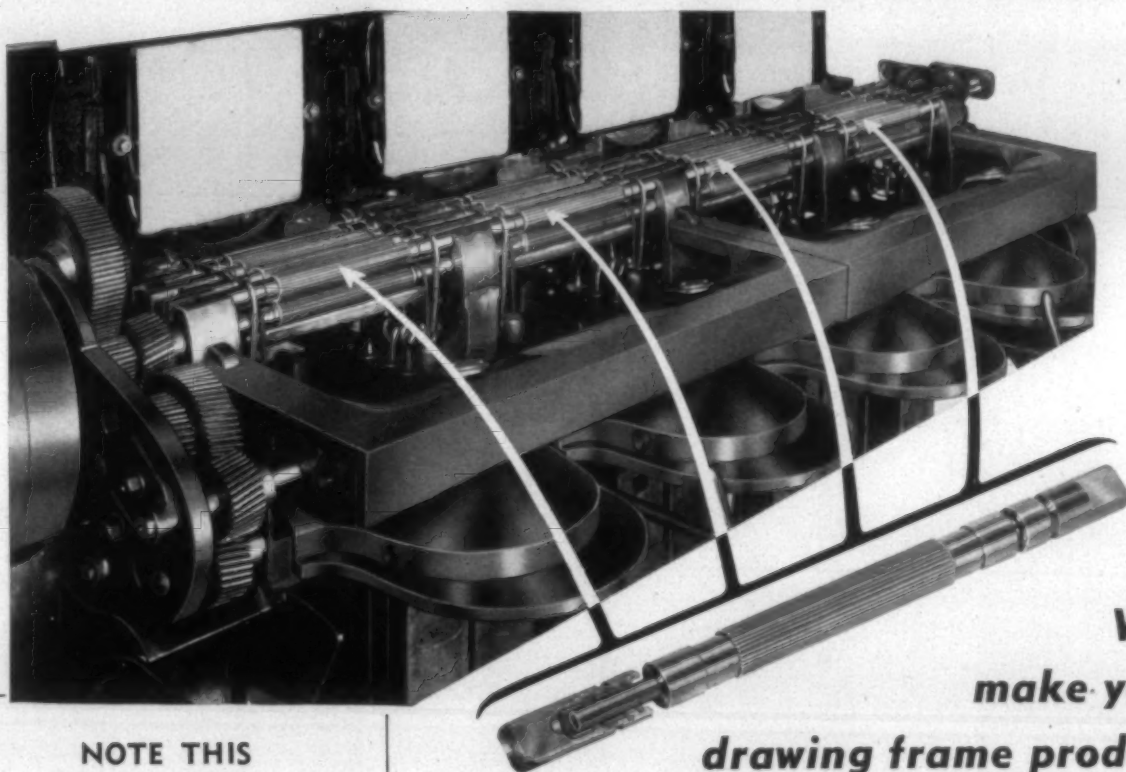
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Winding and Twisting Machinery for Natural and Synthetic Yarns

At Last!

A NEW METALLIC DRAWING FRAME ROLL



NOTE THIS

The collars and necks on the new GOSSETT metallic roll are thoroughly hardened and then scientifically tested. The tolerance on the flutes, collars, and neck is plus or minus one-half of one thousandth of an inch. The run-out of straightness will not exceed plus or minus one thousandth of an inch. GOSSETT also manufactures common or cushion type drawing rolls with the same tolerance as mentioned above.

Here's what you get when Gossett re-builds your drawing frame!

In addition to installing the new GOSSETT metallic roll, the top rolls are equipped with GOSSETT roller bearing shells (there are none better); new stands, new calender rolls, new tension train of spiral gears and studs, new drafting gears and studs, and new trumpets are installed; and the coilers and can tables are re-built. You get back an old drawing frame better than when new.

GOSSETT will also re-build drawing frames with the 5-roll system in the same manner.

**Will
make your
drawing frame produce
a far better grade of sliver**

In the mills now using their old drawing frames that were recently re-built by GOSSETT technicians who installed the new GOSSETT metallic drawing roll, the results have been amazing!

It required months and months of research and designing to develop the new GOSSETT metallic drawing roll. The flutes on this new roll are so designed that it is now possible to produce cotton or synthetic drawing sliver that is far superior in quality to anything known in the past. And, as most everybody knows, quality counts more today than ever.

Find out for yourself what a difference quality makes. Let GOSSETT re-build your drawing frames and you, too, will get better quality sliver than ever before.

Write for full particulars and estimated cost

B. W. GOSSETT, President

E. C. MASON, Sales Manager

D. W. SMITH, N. C.-Va. Representative

GOSSETT

MACHINE WORKS, INC.

GASTONIA, NORTH CAROLINA



WATCHING

WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Competent supervision of union welfare and pension funds will not come up in Congress before next year, or maybe not before another Congress is elected. Funds have been set up at a phenomenal rate as a result of a wartime "freeze" in wage rates, sometimes with no supervision whatever. Adequate records cannot be found to show how money has been spent, or who got it.

Evidence before the Senate Labor Committee indicates it has been easy for racketeers to come into the union field, and seize control of pension funds. They bludgeoned their way in with a new union, set up a pension fund for an easy flow of cash in large volume, and did not account to anyone. Big salaries and commissions took much or most of the money. The A.F.L. has no direct control over the pension funds of its unions.

The Supreme Court finds that unions cannot come to federal courts and ask them to remove state court injunctions against picketing. In a 5-3 majority opinion, Justice Frankfurter said a federal district court in Cleveland was right in refusing to interfere with a state court injunction against "peaceful" picketing at a plant a clothing workers union was trying to unionize. This clarifies a long-disputed point.

In another decision, the Supreme Court says the states must leave injunction proceedings to N.L.R.B. in Taft-Hartley disputes which have already been presented to the board. The decision reinforces the board's authority in assuming jurisdiction, and removes an alleged conflict between Taft-Hartley provisions conferring jurisdiction and granting powers to the states in intra-state labor disputes.

The Attorney General's anti-trust report to Congress recommends outright repeal of all federal "fair trade" laws that allow manufacturers to fix retail prices. Affected would be the Miller-Tydings Act of 1937 and the McGuire Act of 1952. The report said the system strikes at promotional price cutting, and all price reductions which pass economies to consumers in competitive distribution.

Communist-controlled unions are gradually falling by the wayside in bargaining elections that are held by N.L.R.B. In plant elections they have taken part in since 1950, less than 40 per cent have brought victories. N.L.R.B. has revised its rules to give workers more freedom to leave these unions, and enter others affiliated with a national federation. An existing contract is not a bar to holding an election where a union has broken away from or been expelled by a parent union.

The President will not press for statehood for Alaska at this time; neither is it in the early range of his legislative objectives. He says he doubts if any legislation can wholly remove his apprehensions, and the problem has many troublesome aspects, including national defense needs.

Vast defense spending for an indefinite number of years is seen by top military officials as a result of "creeping Communist expansion." Congress is



"The boss will love us both for saving his Dillard sample book."

Dillard PAPER COMPANY

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ATLANTA • AUGUSTA • GREENVILLE • COLUMBIA • ROANOKE • BRISTOL • KNOXVILLE

1926

"IF IT'S PAPER"

1955

asked to grant \$34.6 billion for defense needs in the next fiscal year. Major new elements in the program are an electronics warning net on land and sea, increased weapons systems, and communication systems between warning posts and the weapon system.

Large portions of the President's legislative program are in trouble as Congress passes the half-way mark of the session. Not enough has been done in the session to reveal a clear pattern of what will be its accomplishments, but some of the President's important proposals are facing defeat. Among them are foreign trade and renewal of reciprocal trade powers, superhighways and the school construction aid proposal.

Opposition comes to a high focus on the reciprocal trade bill, with many large industries arrayed against it. Opposition is much stronger in the Senate than it was in the House, which passed the bill by a margin of eight votes after failing to recommit to the committee by one vote. Textile interests are united in resisting features that would allow much larger imports.

The Administration is trying to drop foreign economic aid into an ash can when no one is looking. Pressures, at home and abroad, are still high for bountiful outpourings. But military spending, public works and other things at home are taking all of the dollars unless deficit spending is renewed. The President wants none of that, and would like to hear the last of foreign aid if he can.

Foreign aid will continue in some form after June 30, when it is slated to expire, according to Director Harold Stassen. But remnants will probably be transferred to the State Department. F.O.A. has 6,731 employees, including 2,770 Americans and 2,304 foreigners overseas.

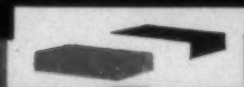
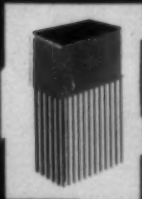
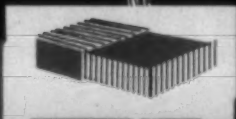
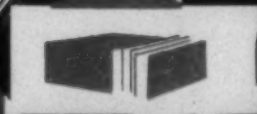
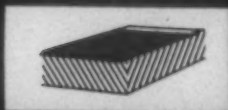
The Secretary of Labor has no power to set nationwide minimum wages for industries holding government contracts, it is ruled by Federal District Judge Holtzoff in Washington. He granted a motion by a number of textile mills to invalidate an order setting a floor wage of \$1 among textile workers doing business with the government. The order was issued by former Labor Secretary Tobin in 1952.

Judge Holtzoff's decision is a serious blow to demands of John L. Lewis to set minimum pay rates in all coal mines having contracts with the government. The Lewis demand has been held in abeyance pending a decision by Judge Holtzoff in the action brought by Covington Mills, in Georgia, and Alabama Mills of Birmingham. It is stated the decision will be appealed.

Judge Boyd Leedom of the South Dakota Supreme Court has been sworn in as a member of N.L.R.B. He becomes the first member with experience on the bench of a high court to sit on the board. The desire of the President is to give more judicial tone to the board, and remove it from the realm of combat and controversy that has beset its career.

Steelworkers are ready to demand a whopping pay raise in a contract with employers to be discussed in June. Current average hourly wage is \$2.23. Mills are now running at 93 per cent capacity, compared with 70 per cent when the present pact was made last year. McDonald's rivalry with Reuther is goading the steelworkers to seek a higher pay increase than may be obtained in the motor industry. McDonald needs a good pay increase to increase his strength among warring factions in his own union.

United Auto Workers have voted for a shorter work week as the next big goal to be sought after a guaranteed annual wage. The number of work hours is not specified, but the union has been talking in terms of a 30-hour week. The union wants Congress to make a study of industrial effects of automation, and of ways for making employment easier for workers beyond age 40.



FIFTY YEARS TO GROW ON

In 1905 — signs of things to come. For the first time, the South processed as much cotton as its northern competitors. Tobacco and furniture manufacturers moved closer to first place in the nation. In its operations from Virginia to South Carolina, the Southern Railway won a new name — "Gold Avenue."

The South was making ready for such a race as had never been in industry. As one keen observer remembers, "There was a new desire for everything, from shoes to music."

And there Old Dominion began, with boxes for shoes in Lynchburg, Virginia. For fifty years, it has pioneered in the creative part of selling . . . from tobacco to textiles, from shoes to soft drinks, from frozen foods to furniture . . . in folding boxes, set-up boxes, and corrugated containers.

"Fifty Years to Grow On" is Old Dominion's promise to meet still greater challenge in your packaging for the future.



Box Company Inc.

Richmond, Virginia

Old Dominion, Charlotte, N. C.

New standards in light fastness



LUMICREASE COLORS

The trend is toward brighter colors, faster-to-sun, in automotive, upholstery and decorative fabrics, and LUMICREASE COLORS by Sandoz are helping to speed the trend.

The LUMICREASE line of direct colors was developed for cotton and viscose. Three of the newest and fastest colors are: LUMICREASE GREY 3LB, pat.; LUMICREASE GREEN 3LB, p.a.f.; and LUMICREASE ORANGE 3LG, pat. These have created new standards in light fastness in shades of green, tan, taupe and grey, and are unequalled by any other products on the market today.

Ask Sandoz laboratories to match your shades. Branch offices:

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312 Main Street

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2215 Tioga Street

TORONTO (Ont.) CANADA

179 King St. West



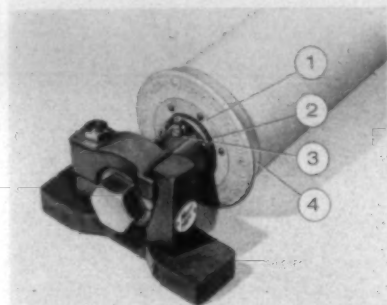
SANDOZ

THINKS AHEAD WITH TEXTILES

For the Textile Industry's Use

— NEW MACHINERY, EQUIPMENT AND SUPPLIES —

Newly-Designed End Seal



Newly-designed end seal for expanders
(Mount Hope Machinery Co.)

Mount Hope Machinery Co. has announced a newly-designed end seal for 4 1/4" and 6"-dia. expanders. The company reports that the new end seal, especially designed to waterproof the bearing area, is (1) precision-molded in 1 piece to provide a close but non-contacting fit (2) around the expander axle. Grease, injected through a cadmium plated Alemite fitting (3), serves as an effective sealant. Only 1 fitting is provided at each end and it is located on the stationary axle so expander may be lubricated while in use. A water flinger (4) that throws off most moisture before it reaches the bearing area is included as part of the seal design. The end seal is available as standard equipment on 4 1/4" and 6" expanders, Mount Hope reports, and is also furnished as replacement equipment in the same size range. (Request Item No. D-1)

Water Repellent Series

Metro-Atlantic announces the development of a new series of durable water repellents to be marketed under the name Ranedare. This series of Ranedare water repellents are new chemical compounds available for the first time to the textile industry. Each Ranedare water repellent was created to meet specific demands in the textile industry. All 3 products have been formulated with high shelf-life, easy running properties with low foam, excellent dilution and mixing properties, the company reports. They all produce durable, dry water-repellent finishes. The use of these products keeps yellowing and tensile strength losses at a minimum, the company states.

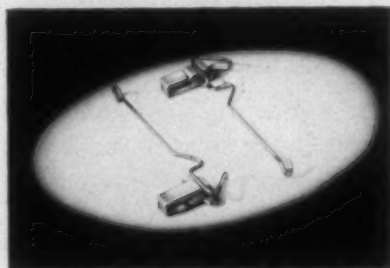
Ranedare R for synthetics is designed specifically for use on synthetic fabrics with crease-resistant and stabilizing effects to provide durable water repellency, shrinkage control, wrinkle and spot-resistant effects. This product reportedly has high shelf-life, is easily diluted in cold water and has excellent running properties with very low

foam. Finished effects are extremely durable to dry cleaning and washing. The product is said to be versatile in that the hand and finish can be varied to suit most any fabric.

Ranedare C for cotton reportedly produces durable water-repellent effects on cotton. It has extremely high shelf-life, is easily diluted in cold water and runs with low foam. Finished effects using Ranedare C are extremely durable to dry cleaning and washing, it is said.

Ranedare S, a silicone for synthetics, is reportedly one of the first durable silicone materials formulated from General Electric's wonder silicone "dry Film". This is free-flowing and is easily diluted in cold or warm water. The Ranefix catalyst for Ranedare S is also free-flowing and is easily diluted in the finishing bath without pre-dilution, which eliminates the risk of water-repellent spots. This product produces a very soft finish with top durability to dry cleaning. It is said to work exceptionally well on such fabrics as velvet and sheers, and in other cases where other durable water repellents fail. It also has high durability to consecutive washings as well as to dry cleanings, and has been found to work especially well on cotton and wool. Both the Ranedare R and Ranefix are considered to have high shelf-life and do not require excessive curing for polymerization, the company points out. (Request Item No. D-2)

AlSiMag Doubler Guides



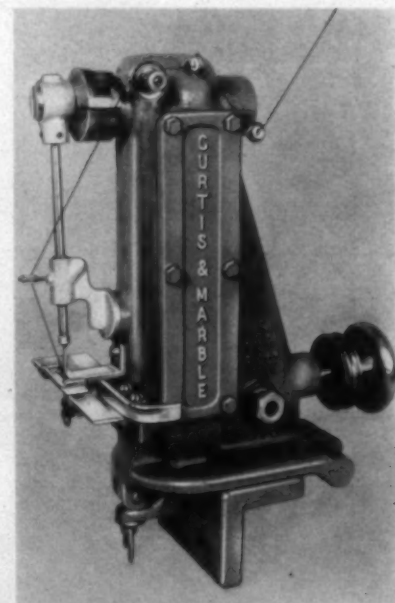
AlSiMag 193 doubler guides for Universal holders (American Lava Corp.)

The Titania Div. of American Lava Corp. has announced the availability of AlSiMag 193 Doubler Guides designed to fit the metal holders, illustrated, which can be obtained only from Universal Winding Co. According to Titania, the guides greatly improve yarn quality through uniform tension. They are extremely hard and durable, thus permitting higher speeds and higher tensions, even on very abrasive yarns. Being homogenous, with no surface "skin" to wear through, they greatly reduce the possibility of yarn damage from undetected guide failure. Their longer life results in the lowest guide cost per pound of processed yarn, Titania reports. The guides are good

electrical conductors and help control static when grounded through the metal holder. Satin finish is standard and other finishes can be supplied on special order. Far longer service has been demonstrated by these AlSiMag guides on Universal's Model 10 ring twister, it is pointed out.

(Request Item No. D-3)

High-Speed Tacking Head



Model ONB-SC high-speed tacking head
(Curtis & Marble Machine Co.)

A new model high-speed tacking head is now being offered by Curtis & Marble Machine Co. The Model ONB-SC head was especially developed for high-speed applications where the cloth is automatically guided through the tacker, the company reports. It is said to be especially valuable where the tacker is running in tandem with a scray and soaper or other equipment that needs to operate at high speed. The head is currently running at 3,200 stitches per minute at one mill installation where it is said to be delivering trouble-free operation on a 3/8" stitch at approximately 50 yards per minute. With the head running at 3,200 stitches per minute, the actual cloth speed obtained will depend upon the length of stitch being used. For example, with a 3/8" stitch the cloth speed is approximately 50 yards per minute; while using a 1" stitch, however, the cloth speed would be nearly 90 yards per minute.

The new design was developed by the research and development department of Curtis & Marble Machine Co. working in co-operation with Hayward-Schuster Mills, East Douglas, Mass. The mill reports free-

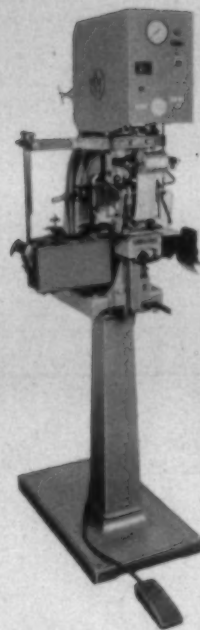
FOR THE TEXTILE INDUSTRY'S USE—

dom from maintenance, being able to run a wide range of cloth through the tacking head without frequent adjustments. Thus the operator has been freed to perform other duties during the running of the tacking range. Curtis & Marble reports that the new head has many desirable features including Neoprene sealed needle bearings for all rotating parts; counter-balanced eccentric, aluminum needle bar head and guide for vibration-free oscillation; splash lubrication system for main bearings and drive chain with easy-to-check oil level indicator; porcelain thread guides combined with adjustable tension device for steadier skip-free

stitching; and completely enclosed silent chain drive. (Request Item No. D-4)

Embossing Machine

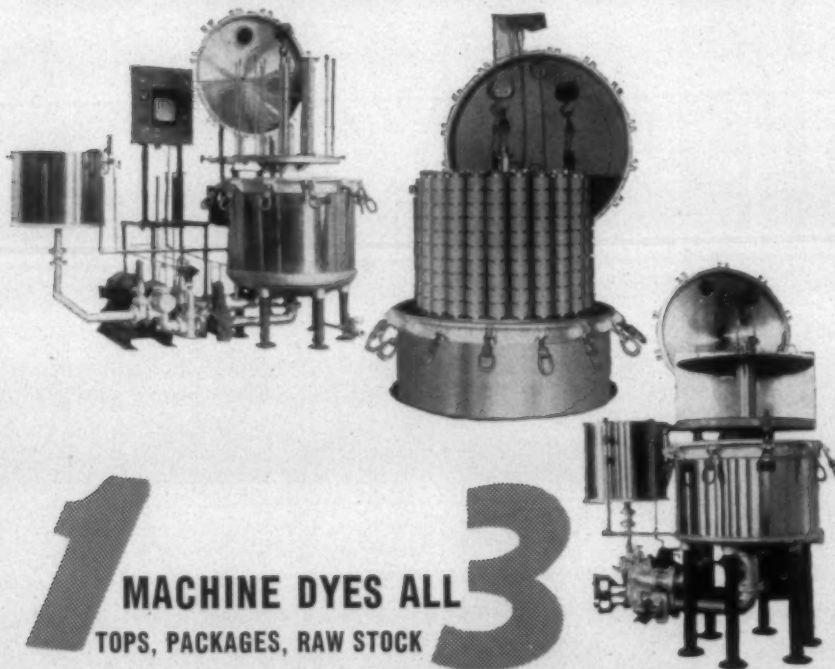
Markem Machine Co. has developed a new machine for embossing trademarks, tradenames and other designs on fabrics. Equipped with a conveyor feed and ejection for rapid production and operator safety, the Model 79A reportedly prints from 20 to 80 objects per minute. Air operated, it is said to require no adjustment for variations in stock thickness. Markem reports that the printing head may be equipped with self-adjusting die jaws for solid embossing dies, or can be provided with a



Model 79A embossing unit (Markem Machine Co.)

slide-in masterplate head to allow interchanging of variables. A lock-up chase for use with individual metal type allows handling of some advertising novelties. Thermostatic heat control of the printing head and high quality leaf provide durable, attractive imprints in gold, silver or colors, the company points out. Model 79A is mounted on a column stand and measures 65" high over-all. Minimum air requirement is 35 lbs. (Request Item No. D-5)

GREATER VERSATILITY MEANS GREATER EFFICIENCY AND ECONOMY



**1 MACHINE DYES ALL
TOPS, PACKAGES, RAW STOCK 3**

This machine is typical of the time-and-money-savings you get from Gaston County's continuous pioneering achievements. By simply changing carriers, this one machine dyes either raw stock or wool tops—or packages, cones, springs, tubes, roving and cheeses—natural or synthetic. Made to ASME requirements, no other machine can match it for complete flexibility of operation and rugged construction. Whatever your dyeing problem, large or small, Gaston County engineers will work with you to solve them efficiently and economically. Write, wire or phone us today for consultation or illustrated literature.

GASTON COUNTY DYEING MACHINE CO.

Pioneers In Automatically

STANLEY

Gaston County Dyeing Machine Co.
Terminal Bldg., 68 Hudson St.
Hoboken, N. J., G. Lindner, Mgr.



Controlled Dyeing Machinery

N. C.

The Rudel Machinery Co., Ltd.
614 St. James St. W., Montreal
137 Wellington St. W., Toronto

National Chrome Dye

National Aniline Div. of Allied Chemical & Dye Corp. announces the addition of National Alizarol Verdon S to its line of non-dusting chrome dyes. National reports that it is applicable to wool by the top, meta and bottom-chrome methods of dyeing. It produces subdued bluish-green shades, with the top-chrome method yielding the brightest shades. It exhibits good light fastness in medium and heavy shades; very good fastness to cross-dyeing, fulling, crabbing and shrink proofing; and excellent fastness to other wet processing including carbonizing. It is said to be suitable for coloring materials that are to be resin finished for crease resistance. This product is more adaptable for raw stock and slub work than for piece goods because of its fast drawing properties, National reports, and it will be found suitable for coloring carpet yarns and knitting yarns for sweaters and bathing suits. (Request Item No. D-6)

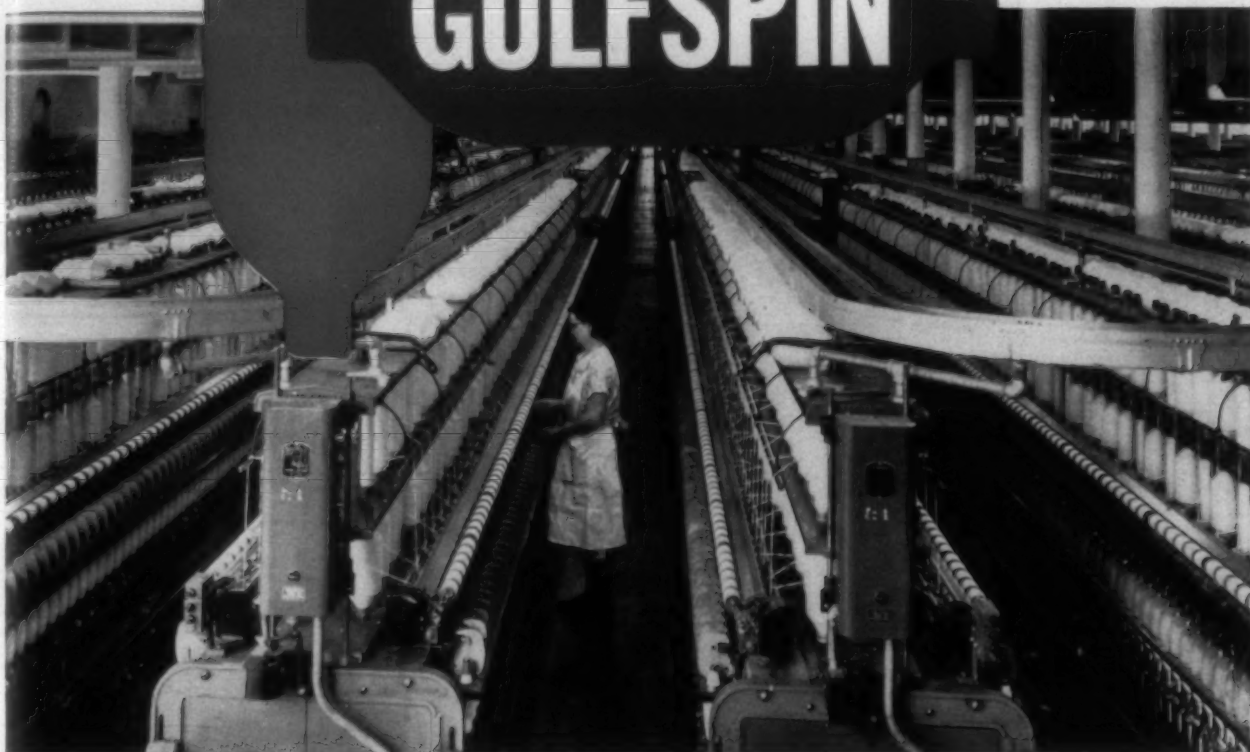
Roof Repair Kits

Ranco Industrial Products Corp. has formulated a special product called Wet Surface Shield-Cote No. R-12 for patching roofs in the rain, or immediately following rain while the roof is still wet. As pointed out by Ranco, occasions arise when a roof leak must be stopped immediately, even while it is raining, because of the damage water

Keep spindles spinning true

with

GULFSPIN



Keep your spindles spinning true with a minimum of vibration and drag. Use Gulfspin, the spindle oil that resists sludge formation, that holds contaminants in suspension so they do not deposit on spindle parts, and that provides effective protection against rust.

You also reduce power costs with Gulfspin. Ordinary spindle oils often thicken after a few months of service, requiring

increased power. Gulfspin shows no increase in viscosity after many months of service.

You'll find that these advantages all add up to smoother spindle operation, fewer ends down, and rock-bottom maintenance and power costs.

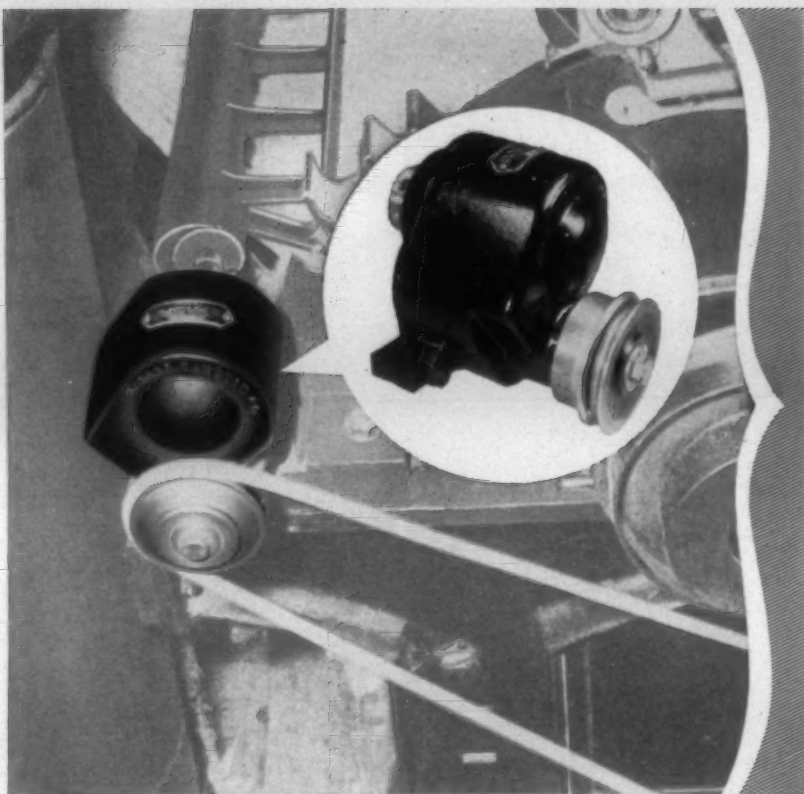
Contact a Gulf Sales Engineer at your nearest Gulf office today and give him a chance to prove the superiority of Gulfspin on your frames.

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THE FINEST PETROLEUM PRODUCTS FOR ALL YOUR NEEDS



OUTSTANDING SUPERIORITY OF SOUTHERN STATES COMB BOXES PROVED IN NATION'S MILLS

More than 30,000 Southern States Comb Boxes have been placed in service during the past 7 years—equal to 35% of all the nation's cotton cards. Many mills have changed over 100%.

This overwhelming acceptance proves conclusively that mills can easily justify the small investment. Cardroom overseers quickly recognize the savings that result from their use: no oiling, cleaning or maintenance for the life of the unit; steady, even strokes to drive the comb with perfection; elimination of hot-running, leaky, rattling old-style boxes and their headaches.

Southern States Comb Boxes are furnished complete with an adjuster base for mounting on any make of cotton card. Bases are double tapped to permit rapid mounting on either right or left hand cards. Installation is quick and easy.

Let us show you with facts and figures how it has paid hundreds of mills to install Southern States ball-bearing, sealed-for-life, Comb Boxes; prove how much they will save you in one year. Write direct for a representative to call at your convenience.



SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

FOR THE TEXTILE INDUSTRY'S USE—

can do to plant operations, equipment, supplies, etc. With ordinary roofing materials it is not possible to patch such leaks because ordinary roofings will not adhere to a wet surface. Also, many times it is desirable to repair a roof in the rain if a particularly difficult leak presents itself. By patching the roof while it is raining, maintenance men can be sure the leak has been fixed.

Wet Surface Shield-Cote No. R-12 is a heavy-bodied, liquid-brush consistency. Ranco reports, and is also available in a heavier trowelled consistency called Wet Surface Shield-Tite No. R-37. Both products are available in special kits which contain all necessary materials to do a permanent patching job. The kits are available in 2 different sizes, the large kit designated as R-13-L and the smaller size R-13-S. The large kit contains 55 gals. of Wet Surface Shield-Cote No. R-12; 300 lbs. Wet Surface Shield-Tite No. R-37; 2 rolls 6" Ranco Glass Membrane No. R-27; and 2 Everlast (3-knot) roof brushes No. R-71. The smaller kit contains 30 gals. Wet Surface Shield-Cote No. R-12; 100 lbs. Wet Surface Shield-Tite No. R-37; 1 roll 6" Ranco Glass Membrane No. R-27; and 1 Everlast (3-knot) roof brush No. R-71.

The Wet Surface Shield-Tite can also be used to repair cracks in concrete tanks, even while the tanks have water in them, Ranco points out. (Request Item No. D-7)

Electric Productimeter

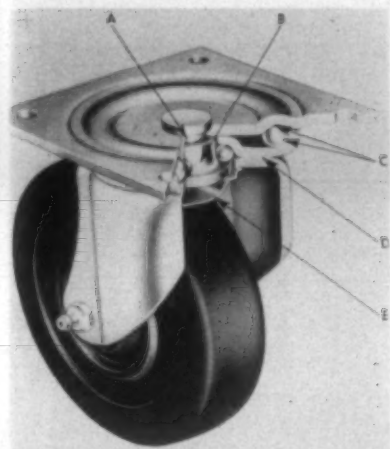


Model 6-Y-1-2-MF Productimeter (Durant Mfg. Co.)

Durant Mfg. Co. announces the addition of a tamperproof, tumbler-lock reset electric counter, Model 6-Y-1-2-MF to its line of electrically-operated Productimeters. The firm points out that Model 6-Y-1-2-MF is designed for panel mounting, and comes equipped with mounting plate, the lock reset being at the right of the plate. The entire assembly can be placed into a panel directly from the front and securely fastened from the front. This new model features the modern straight-line motif, executed in 2 tones of silver and seal brown. The counter is totally enclosed, affording great protection against dust and moisture conditions. Over-all dimensions are: 5 1/2" long, 2 9/16" deep and 2 1/8" high. Figures are 9/64" wide by 3/16" high, white on dark background. The number wheels are high in the window for maximum visibility. Hardened steel working parts used throughout assure long life and dependable service. The operating speed is up to 1,000 counts per minute. Standard voltage is 110 v., 60 c., a.c. Voltage fluctuations on normal industrial circuits have no effect on the accuracy of this unit, Durant points out. Model

Y-1-2-MF is said to be the first moderately-priced lock reset panel electric counter on the market. Figures cannot be changed without the key, a tamper-proof feature that assures exact production readings at all times. (Request Item No. D-8)

Grease Retainer Cup



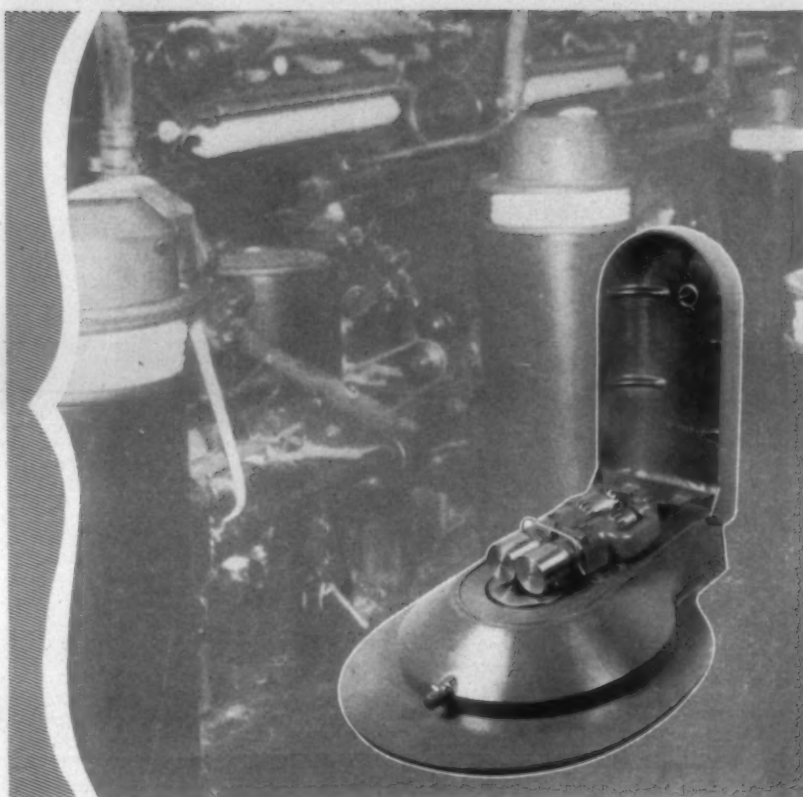
Cutaway view of S99 heavy-duty truck caster with standard grease retainer cup: A, extra-heavy kingpin; B, hardened and machined lower raceway; C, hardened and curved raceways and balls; D, projection weld securing horn assembly parts; E, grease retainer cup sealing in lubricant. (Bassick Co.)

A new snap-on grease retainer cup, which prevents lubricants from draining out of caster swivel bearings, is now standard at no extra cost on 2 more Bassick truck caster types. The Bassick Co. reports. Latest casters to offer this important feature are the medium-duty H99 caster (in 5", 6" and 8" sizes) and the heavy-duty S99 caster (in 6", 8" and 10" sizes). Prime advantage of the grease retainer cup, according to Bassick, is complete retention of swivel bearing grease. Lubricants cannot drain from the bearings. This not only prolongs the service life of the caster, but also protects floors and caster wheel treads from the harmful effects of dripping grease, it is said. In addition, hazardous conditions due to oil or grease slicks on floors are eliminated. Other standard features on these casters which help them deliver extra years of service are: extra-heavy kingpin; hardened and machined lower raceway; hardened and curved raceways and balls; projection welded to secure horn assembly parts.

(Request Item No. D-9)

Celanese Fortisan-36 Yarn

Fortisan-36 yarn, the new super-strong industrial rayon fiber developed by Celanese Corp. of America for use in power transmission belting, high-pressure hose, fire hose, conveyor belts and other applications requiring high strength and dimensional stability, will be available in 800-denier (the individual fiber size being 1-denier per filament) with an 0.8 twist on 4 lb. cones. However, it is anticipated that heavier-denier yarn, as well as zero twist yarn, will be produced later. Plans are also under way for the delivery of yarns on beams, in addition to cones. Equipment and machinery



SOUTHERN STATES COILER HEADS MAKE CONVERSION TO LARGER CANS A SELF-PAYING PROPOSITION

Every mill man with an eye for ways to cut card room operating costs knows the advantages of larger cans. But what some don't realize is that Southern States conversions are so economical that they pay for themselves—a fact proved by case histories of mills throughout the country.

The Southern States Universal Coiler Head, illustrated above, is designed for either 14- or 15-inch cans. It is adaptable to any make of coiler. Using this head, intermediate gearing, coiler base and *your existing stand*, an inexpensive installation can be made in your mill.

Then you can enjoy all of these advantages: simplified oiling; ease of maintenance; smaller parts inventory; more efficient handling; lower operating costs; and improved quality. The photograph shows the simplified design of this head. Notice the streamlined cover and bonnet. Cut tooth gears and oilite bearings are used throughout. It is precision built for years of satisfactory service.

Get full facts from your Southern States representative, or send your request direct to the home office for a quick reply.



SOUTHERN STATES

EQUIPMENT CORP.

HAMPTON, GEORGIA

The Textile Shops

Acid Tanks	Coppersmithing	Picker Screens
Ball Bearing Journal	Cowl Ventilators	Perforated Metal
Assemblies for Slashers and Dry Cans	Cylinders	English Wire Cloth
Bleaching Tanks and Tubs	Spinning	Galvanized Wire
Card Screens	Spooling	Pneumatic Conveying Systems
Repairs, New	Twisting	Quill Cans
Card Screen Bars and Ribs	Drip Pans	Rolls of All Types and Sizes
Card Screen Lickerins for Cotton and Rayon	Dye Kettles and Vats (New)	Size Kettles
Chemical Tanks	Dry Cans	Tanks
Condensers	New and Repairs	Waste Screens
Condenser Screens	Driers	Special Machines Custom Built
Conveyors	Filters	
Pipes and Returns	Misc. Sheet Metal Work	

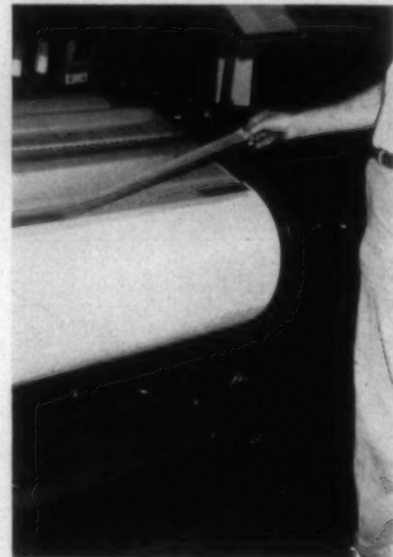
SPARTANBURG, SOUTH CAROLINA, U. S. A.

FOR THE TEXTILE INDUSTRY'S USE—

are now being installed at the Rome, Ga., plant of Celanese for the production of Fortisan-36 fiber. Initial output is scheduled for the fourth quarter of the year.

(Request Item No. D-10)

Adhesive Paper Tape




No. 131 Behr-cat Flatback tape being put to use on slasher beam (Behr-Manning).

A new adhesive paper tape is being introduced by Behr-Manning, a division of Norton Co. Known as No. 131 Behr-cat Flatback tape, it is said to be especially suited for holding applications in the textile industry because of its high tensile strength, high tack and total freedom from adhesive deposit. Recommended for such operations as splicing textile webs or tabbing the final lap on bolts of cloth, the tape is said to be equally useful for secure holding of protective coverings on large equipment in shipment and for sealing of fiber tubes and cartons. Minimum tensile strength of the tape is 45 lbs., which Behr-Manning reports is more than double that of standard paper tapes. This strength is attained by use of a backing made of 4-mil rope stock and matched by an adhesive strength of 65 ounces per inch of width. Elongation is 5%, total thickness is 8 mils and the tape withstands temperatures up to 250° F. It is manufactured in 60-yd. rolls in widths from 1/4" to 3", with greater widths available.

(Request Item No. D-11)

Surface Abrasion Tester

Now available to those laboratories desiring surface abrasion or pilling tests is the CSI-Surface Abrader, made by Scientific Instruments Inc. One of the features of the CSI-Stoll Quartermaster Universal Wear Tester (surface abrasion) has been redesigned into a smaller instrument. In redesigning, the aims were to furnish a unit at a reduced cost. This was accomplished by using smaller castings and eliminating the air pump, the company reports. Laboratory air source is utilized in place of the pump. The unit is capable of reproducing either unidirectional




EVERYBODY'S TALKING ABOUT...

**The assistance given
to cotton weaving
mills by Penick &
Ford's Technical
Representatives
enabling them to
operate at lower
humidities without
loss of efficiency.**

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COMPARISON PROVES THE

SAFETY

OF THE NEW MODERN

TYPE M

ROVING BOBBIN CLEANER

Note the scratches and nicks on bobbin No. 1. They are the result of obsolete cleaning methods. Compare it with the finish on bobbin No. 2 which is in perfect condition, after repeated cleanings on the New Type M Roving Bobbin Cleaner. This modern machine removes waste with jaws of a new design, so shaped they cannot nick or mar the finish.

FINISH MARRED AND NICKED

NO. 1

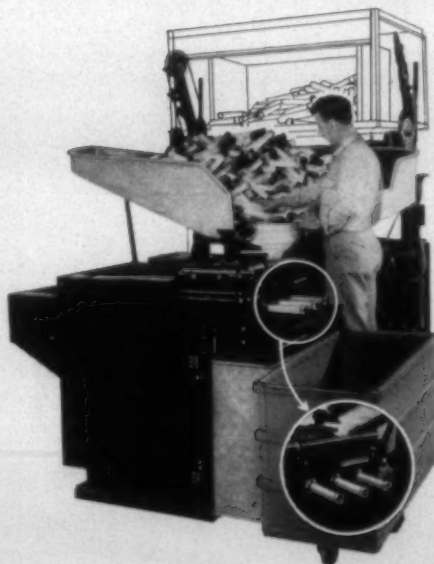
FINISH LIKE NEW

NO. 2

The New Type M Roving Bobbin Cleaning Machine, with the labor-saving Bobbin Box Hoist, is the safest, most efficient, most economical method ever devised for removing waste from roving bobbins.

Works equally well on

- COTTON
- SYNTHETICS
- WOOL



THE

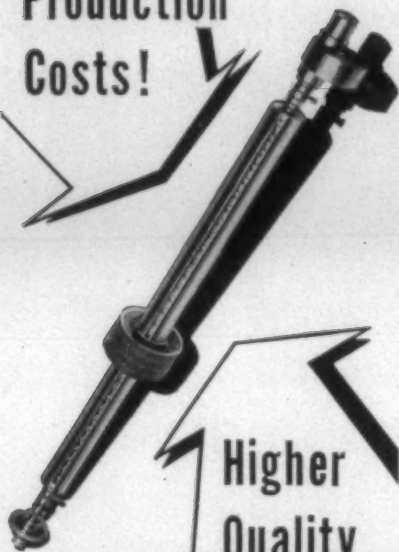
Terrell

Consult Terrell for additional detailed information, or to survey your bobbin cleaning requirements.

MACHINE COMPANY, INCORPORATED

CHARLOTTE, NORTH CAROLINA

**Lower
Production
Costs!**



**Higher
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tional or multidirectional abrasion of uniform intensity over the abraded area. The method consists of inflating the test specimen by controlled air pressure and accurately controlling the pressure of the abradant on the specimen by means of dead weights. This surface abrasion procedure makes it possible to control the tension of the specimen, the areas of contact and the pressure between the specimen and the abradant, and minimizes disturbances arising from unevenness of specimen and interference of fabric debris.
(Request Item No. D-12)

Mechanical Stroboscope

A mechanical stroboscope which has an intense white light of 225,000 candlepower has been announced by Guider, Roll and Service Co. This concern, until now, has specialized in designing and making guiding machinery and kindred equipment. The light was designed at the request of a customer who needed to see the design register and color of his printing without stopping the printing machine. The new stroboscope is of a simple design. There is a motor and a belt and an arrangement for controlling the light speed to synchronize the latter with the pattern to be strobed. Anyone can operate it with a couple of minutes instruction according to the manufacturer.

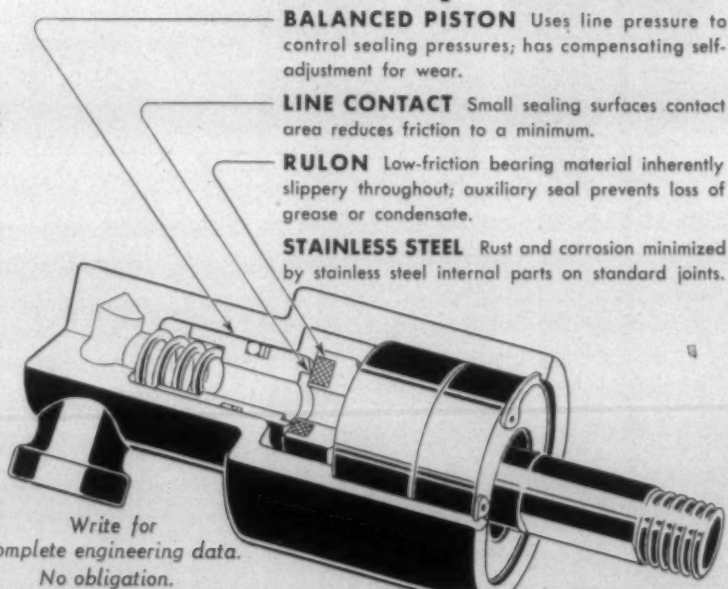
The light, which is known as the Hetherington Mecho-Strobe, has a curved mir-

ror which catches the rays from the powerful sealed-beam unit. This mirror revolves at speeds from 10 to 70 revolutions a second depending upon the speed or revolutions of the article to be strobed. The manufacturers say that practically any object which rotates or moves back and forth such as a shuttle, travels continuously in one direction, such as fabric, and which has a repeated pattern or design, can be readily strobed. Large designs a foot or so apart are more difficult to strobe since the intense white light flashing at less than 10 times a second is hard on the eyes. Sun glasses reduce this glare but these also affect the depth of the color if this is important. Fast moving cloth with small designs close together are relatively easy to strobe accurately so that cloth moving at 200 yards a minute appears to be standing still, according to the manufacturer.
(Request Item No. D-13)

Instrument Bearings

Split Ballbearing Corp. has announced the development of new thin section instrument bearings. The method of manufacture is unique, the company reports, and results in a bearing with a complete ball complement and concomitant advantages of high load capacity and longer life, without a loading notch. In addition, the manufacturing method allows construction of integral shields as a part of the bearing, something not possible with conventional methods, Split reports. The new series has the same

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boundary dimensions as the AFBMA B-500 series torque tube bearings. Bore sizes offered range from .6250" to 3.1245". Various constructions are offered—1-piece synthetic retainers, full ball complement, alternate undersize ball complement or either of the latter 2 with integral shielding.

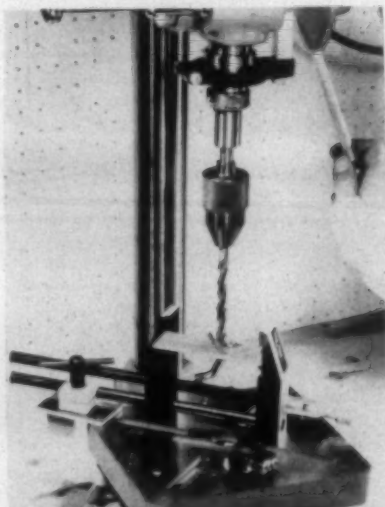
(Request Item No. D-14)

New Metlon Yarn

The Metlon Corp., manufacturer of non-tarnishing metallic yarns, has introduced a new type of iridescent yarn designed to create the important pearlescent effect which has caused so much comment in the European markets. The new domestic yarn is available in the 1/50" and the 1/32" widths. Metlon reports that its iridescent appearance gives an entirely new look to fabrics, and because of its subtle diffusion of color, it can be used without restraint. Wherever the jewelled look is wanted, iridescent yarn can fill the gap, Metlon points out.

(Request Item No. D-15)

Multi-Purpose Vise



Low-cost maintenance vise (Float-Lock Corp., American Machine & Foundry Co.)

A low-cost workshop vise capable of solving many work-holding problems for mill maintenance departments has been introduced by Float-Lock Corp., a division of American Machine & Foundry Co. Modeled after the line of larger A.M.F. Float-Lock safety vises for industry, the new Mity 7 vise offers a versatile grip and is said to eliminate the need for at least a half dozen specialized tools. The vise holds the work equally well in all positions. A full-strength grip is assured by a 10-threads-per-inch Acme screw from 0 closing to the full opening of 7", or 9" when used as a C-clamp. As a drill press vise, the Mity 7 floats to any position on the drill press table and is locked in position instantly by a quarter turn of the anchor handle for drilling duplicate holes in similar pieces. Even if the drill catches, the work or the vise cannot spin and cause an accident. Mity 7 works as well on a bench as it does on a drill press. It can be swung off the bench, swiv-

eled, used on its side or end, and can be angled conveniently from the vertical for any job. Used as a bandsaw vise, Mity 7 adjusts to tricky, hard-to-hold pieces. Hands are always far away from the blade. Maximum leverage is obtained with the long anchor shaft. Movement of the work can be controlled more easily and with greater accuracy. In addition to its use as a drill press, bench and bandsaw vise, Mity 7 has many other applications in sawing, wrenching, clamping and plumbing work. All-steel construction and precision manufacturing indicate for Mity 7 a long, trouble-free life. The Mity 7 includes a mounting bracket for machines, and anchor plate and screws for bench mounting.

(Request Item No. D-16)

Metal Primer

Rusticide Products Co., specialists in corrosion and maintenance products, is offering a unique metal primer guaranteed to stop rust action and reduce maintenance painting costs. Called Ospho, this product is not a paint—but a primer. When applied to rusted surfaces it causes iron oxide (rust) to chemically change to iron phosphate—an inert hard grey substance which is a perfect base for paints, the company reports. After Ospho is applied and dry, rust action is said to be completely checked and the subsequent paint coating attaches itself so tightly that moisture and oxygen cannot attack the metal. The primer is supplied in gallon bottles 4 to a case, 10-gal. kegs and 50-gal. barrels.

(Request Item No. D-17)

Silicone Water Repellent

The Cravenette Co., announces a new silicone repellent for woollens, worsteds, blends of wool or worsted with either Dacron or acrylic fibers.

This new product will be offered as Cravenette super silicone water repellent. According to the manufacturer, no catalyst is needed. The repellent is merely mixed with water and applied. No curing temperatures are necessary. Maximum results are obtained, with complete drying, at 200 to 240° F., in 5 or 6 minutes. Fabrics treated with the repellent reportedly show high resistance to non-oily spots and stains, are given a superlative hand and woollens are actually up-graded.

(Request Item No. D-18)

Du Pont BCI Plastic Nylon

The first license to produce and market commercially Nylon 8, a new plastic with greatly increased life-prolonging qualities, has been granted by Du Pont to Belding Corticelli Industries Inc., newly-established subsidiary of Belding Hemingway Co. Inc. Designated as Nylon 8 by Du Pont, it is to be known as BCI Nylon as produced in commercial volume for the first time by Belding Corticelli Industries for diversified uses in the textile and other industries. Unlike original nylon, BCI Nylon can be processed in liquid form, as well as by the standard methods used for all plastics. It is being produced at the newly-equipped Putnam, Conn., plant of Belding Corticelli Industries in granular, pellet and liquid form. According to Belding Corticelli, it

sharply reduces damage from abrasion and other wear factors thus prolonging product life. Its chief characteristics are said to include high strength and toughness; it will not break from flexing because of high elasticity; will bind pigments to textiles simultaneously with printing; and may be used as a fiber binder in the manufacture of non-woven fabrics of rayon, nylon and cotton.

(Request Item No. D-19)

Jointed Rule

A jointed stainless steel 2' rule, which also serves as a protractor, has been introduced by the George Scherr Co. Inc. This new tool is said to be one of the most practical and useful aids for mechanics and draftsmen to measure longitudinal as well as angular dimensions, avoiding time-wasting difficulty of counting fine graduations. The jointed rule has an accurate scale of chords engraved on one side from 0 to 120 advancing by half degrees and it is also provided with 2 center dots, 1 on each blade, by which when using a pair of ordinary dividers, the rule can be set to any desired angle, or vice versa, any angle can be determined. The stainless rule has graduations reading in 1/8", 1/16", 1/32" and 1/64". The joint is provided with a spring tension which supplies sufficient friction to hold the angle setting rigid for scribing and layout work.

(Request Item No. D-20)

Acrylic-Type Ester

A new polymeric acrylic-type ester in solid, granular form is now being manufactured by Rohm & Haas Co. Called Acryloid B-66 (100%), the material may be dissolved or dispersed in many types of organic solvents to produce clear, water-white solutions. It can be used to form tough, clear, color-stable protective coatings having excellent print resistance and resistance to hot, soapy water. A typical use for Acryloid B-66 is in the production of color-stable white enamels. The material dries quickly in air, has high hardness and outstanding color retention at temperatures as high as 375° F. Superior film adhesion may be obtained from a short bake period at 300° F. Rohm & Haas reports that it has good compatibility with several types of film formers. When properly blended, it yields films of outstanding adhesion, hardness, flexibility, color stability and fast drying properties.

(Request Item No. D-21)

National Black K Salt

National Aniline Div. of Allied Chemical & Dye Corp. has announced the addition of National Black K Salt to its line of stabilized salts. It produces, on cotton and viscose rayon, jet black shades when combined with National Naphthols AS-BG, AS-BS and AS-SW; while reddish black shades are obtained when coupled with most of the other National Naphthols. Most of these colors possess very good to excellent fastness to light, washing, soda boil, hot pressing and other wet processing, National reports. This product may be applied on the continuous padding range, in pressure package machines and in open tubs. It is suitable for application by the various printing processes.

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es and many of the combinations may be discharged to good whites with hydrosulfite discharge pastes. It is suitable for sport and work clothes, children's play clothes, prints and materials to be rubberized, National reports. (Request Item No. D-22)

Moisture Monitor Components

Strandberg Engineering Laboratories has announced the development of 3 new pro-

ducts in its Moisture Monitor line. Two automatic controllers, Type Nos. SC-500 and SC-550 are offered for "plug-in" connection to Moisture Monitors now in service on slashers and various finishing machinery throughout the textile industry. The new equipment is completely electronic, small and very serviceable, Strandberg reports. The 2 units have been in research and development for more than 3 years and make use of the very latest and most acceptable automatic control components, including the General Electric GL502 gas control tube.

The third product is the Strandberg Picker Tare Weight Indicator, developed jointly by Strandberg and Kendall Research Laboratories, for maintaining high lap uniformity. The instrument is calibrated in terms of moisture content and weight. The scale calibration is based upon 44.7 lb. lap at 7% moisture content. At 9% this lap would weigh 45.7 lbs., and with a $2\frac{3}{4}$ lb. pin, the total weight would be 48½ lbs. The picker lap scale should indicate this weight, but other reasonably close weights can be used without appreciable error.

(Request Item No. D-23)

For the Mill Bookshelf

Foster Take-Up Winder

Foster Machine Co. has announced publication of Vol. 5, No. 1 in its *Foster Facts* series. This issue is devoted to Foster's new Model 403 take-up winder for unstretched nylon tow. The bulletin gives a complete description of the winder, including specifications and special features. As pointed out by the company, the new Model 403 winder is designed primarily to take up nylon directly from the spinnerets. It cannot be adapted to wind viscose or acetate rayon, and is not recommended at this time for any other synthetic fibers. It is designed to produce large packages at yarn speeds up to 6,000 ft. per minute.

(Request Item No. D-24)

Application Of Automatic Controls

Barber-Colman Co. has announced the release of a new Wheelco technical bulletin—Educational Bulletin No. 9—for those interested in the application of automatic control equipment to the solution of industrial process control problems. The new 16-page bulletin discusses conventional millivoltmeter construction and its application to a control instrument. Also described is the function of an oscillator circuit in a pyrometer controller, along with various control forms which can be developed from this type circuit. The bulletin also includes 2 pages of information which can be of help in determining the proper type control system to meet process requirements. Of particular interest to control engineers is the detailed description of saturable core reactor control for electric loads.

(Request Item No. D-25)

Spinning And Twister Rings

Whitinsville Spinning Ring Co. has announced the release of its new price list on spinning and twisting rings. Prices are quoted on reversible and single flange rings, $5/16"$ or $3/8"$ deep, which seat in holders; common and plain vertical rings; reduced rings; expanded rings; banded rings; cast iron holders; steel plate holders; brass plate holders; Eadie Whitely rings; Eadie laced

rings and holders; and Eadie multiple-groove twister rings. Quantity discounts on both rings and holders are also listed.

(Request Item No. D-26)

Salvage Printing Machine

Trumeter Co. announces the release of a 4-page descriptive folder on the Maag salvage printing machine, manufactured by Maag Bros. Machine Works Ltd., Kusnacht (ZH) Switzerland. Trumeter is the sole agent for Maag in the U. S. The folder points out the special features of the salvage printing machine, complete with construction details and illustrations. It is said to be the only machine on the market capable of printing with ink or blocking with gold or colored lettering by a heat process. The machine is equipped with one or the other of these methods according to customers' requirements. It will print equally well, Trumeter reports, on the finest silk or the coarsest cotton. Light to medium-heavy woolen goods are also successfully processed on the machine.

(Request Item No. D-27)

Lubrication Chart

A handy wall chart containing lubrication recommendations for many industrial needs is now available from E. F. Houghton & Co. This chart covers such applications as hydraulic systems, spindles, air compressors, reduction gears, electric motors, conveyors and other general uses. Printed on tough varnished stock for protection from smudging or handling, this 2-color chart can be displayed in prominent places to help eliminate lubricant misapplications.

(Request Item No. D-28)

General Dyestuff Circulars

General Dyestuff Co., a division of General Aniline & Film Corp., announces the release of the following new circulars: G-785, Fastusol Brilliant Blue L8GU; G-786, Fastusol Blue LRRU; and G-790, Celliton Blue GA Extra CF.

Fastusol Brilliant Blue L8GU is a new,

straight, substantive dyestuff especially recommended for the production of fast-to-light shades on cotton or rayon, particularly where the goods are to receive an anti-crease resin finish or acetate-effect threads are to be left white. It produces very greenish, bright shades of blue, which have very good fastness to light in full shades on cotton and excellent on rayons. It is made in the form of a non-dusting powder which is soluble to the extent of about 6 oz. per gal. at 120° F. It is said to exhaust very well at a rapid rate in the presence of salt in the dyebath, but releveles well when drawing onto the fiber, so that it is classified as a Class B (salt-controllable) dyestuff in respect to dyeing behavior.

Fastusol Blue LRRU is a straight, fast-to-light direct dyestuff for cotton and rayon, which is outstanding in light fastness on cotton and especially on rayon. It is particularly recommended for fabrics that are to be anti-creased, because it retains excellent light fastness so well upon resin finishing and leaves acetate-effect threads clean. It gives bright, reddish-blue shades on cotton and rayon and shows excellent resistance to hot pressing. In dyeing, it is not salt-sensitive.

Celliton Blue GA Extra CF is a straight disperse dyestuff recommended for dyeing economical medium-blue shades of fairly good light fastness on acetate textiles in all forms in any kind of equipment. It is also very useful for dyeing Orlon 42, on which it yields bright medium-heavy blues of very good to excellent light and wet fastness when dyed at 200° F. without pressure or carriers. Recommended also for Dacron, it gives economical but very much duller blues of fair light and wet fastness.

(Request Item No. D-29)

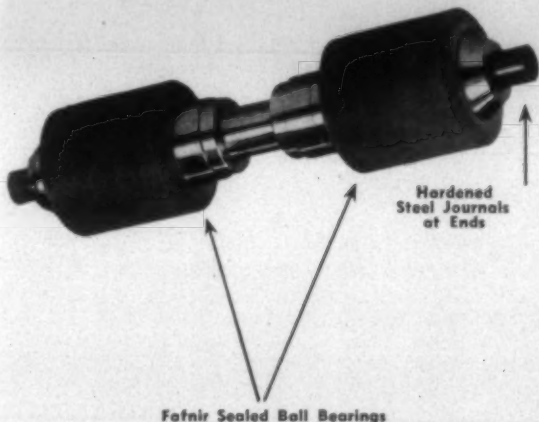
Magnetic Ideas From Eries

Eriez Mfg. Co., world's largest producer of permanent magnetic separators, is now offering a new brochure, *Magnetic Ideas From Eries*. This 2-color, 24-page booklet features descriptions of how magnetic ideas have been applied with engineering know-how to solve many vexing problems in innumerable industries. Case histories, high-

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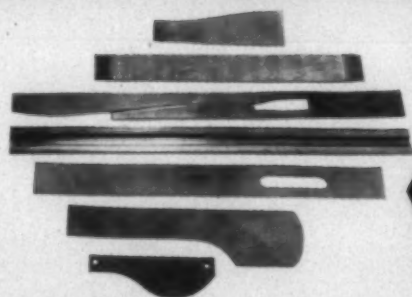
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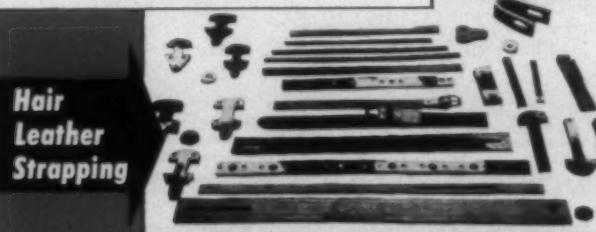
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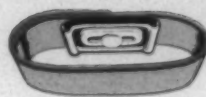
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lighted by actual photographs of installations, explain how various companies are using permanent, non-electric magnets to prevent iron contamination in their products, protect their machinery from damage by tramp iron or prevent fires. Some of the magnetic equipment covered in these illustrations are plate magnets, magnetic grates, magnetic pulleys, ferrous cleaners and magnetic sweepers. The new Eriez Magnalarm which signals automatically when the magnet needs cleaning is also described. Listed are over 100 uses for permanent magnets. The reason for the use of a magnet is briefly stated next to each product given under the main categories. The information is given in an informative, non-technical style. (Request Item No. D-30)

Motor Buying Information

A new 28-page catalog of buying information on a.c. motors is available from the General Electric Co. Designated GEC-1026, the bulletin presents complete buying information on standard a.c. fractional and integral horsepower motors in most general use. Included are general and definite-purpose fractional horsepower and gear motors. A special section on the selection of integral horsepower motors covers horsepower requirements, enclosures, starting current limitations, speeds, motor types and selection of fuses and circuit breakers. Descriptions and specifications include single-phase,

poly-phase, totally-enclosed fan-cooled and gear-type integral horsepower motors. Information on all motors includes photos, ratings, book prices, dimensions, weights, frame numbers and standard modifications. (Request Item No. D-31)

Variable-Speed Pulleys

Publication of an 8-page brochure describing Hi-Lo automatic variable-speed pulleys and Hi-Lo systems has been announced by Equipment Engineering Co., national manufacturer of variable-speed mechanisms. The brochure lists the advantages of the pulley and is documented with graphs, diagrams, cutaway views and photos of the unit in action. Specifications and list prices of the pulley are given along with data on 3 available bases. A page is devoted to a discussion of the Hi-Lo system, supplemented by complete speed range tables. (Request Item No. D-32)

3-D Microscopes

The value of 3-dimensional microscopes for industrial assembly lines and research laboratories is described in a brochure published by the Bausch & Lomb Optical Co. The brochure features 3 photographs which can be observed through a viewer that produces a 3-dimensional depth effect. One of the photos demonstrates the visual relationship between the various parts of a watch assembly when seen at a magnification of 6 diameters. The value of wide-field 3-dimen-

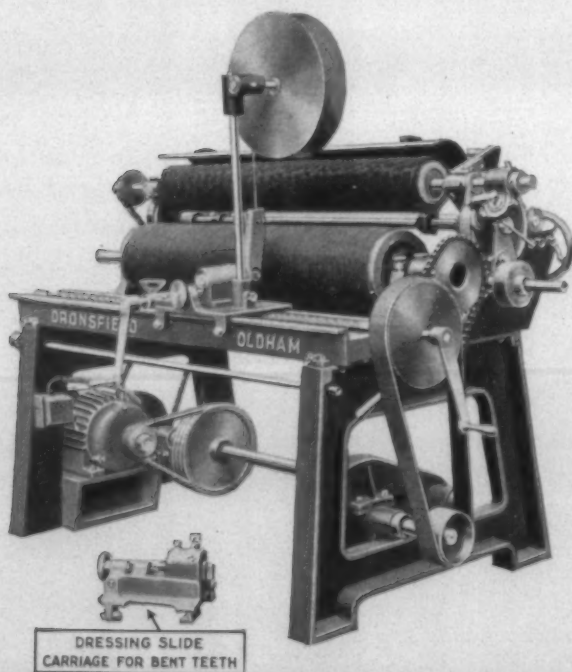
sional magnification for various assembly and inspection operations is explained in detail. The proper microscope for a specific type of work can be determined by using a 10-question automatic model-selector card. (Request Item No. D-33)

Lint-Tight Starter

New literature has been released by Cutler-Hammer Inc. on the lint-tight starter especially designed for use in conjunction with loom motors in the textile industry. The across-the-line starter is used with single-phase and poly-phase squirrel cage motors and with small direct current motors on applications involving textile motors, machine tools, fans, pumps and any application in dusty atmospheres. The gasketed cover on the starter is said to provide a perfect seal against lint, erasing a major cause of weave room fires. The starter provides free tripping and a tamper-proof mechanism. Having overload protection, it will instantly sense the power of a damaging overload but will not stop motors needlessly because of a slight increase in current. The motor is allowed to run at its safe, full capacity. This added boost is made possible by the eutectic alloy thermal overload, which trips at the exact instant, not too late, not too soon. Overload heater coils can be selected accurately, getting maximum output from the motor, Cutler-Hammer reports.

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carries the all-steel operating mechanism. Molded material is used only for insulating purposes. It stands on a shock-absorbing formed and welded steel pedestal with a full-length back. The starter has plated steel members and springs of stainless steel to resist corrosion. The case and cover are powderized, assuring lifetime resistance against rust. Fine silver, twin-break contacts are carried on non-arc-tracing pockets. The starter is easily inspected by loosening the single captive screw and the cover will lift off with ease, exposing the entire mechanism for inspection. Terminals are fully accessible, simplifying wiring. Contact tips may be quickly inspected or replaced without removing the switch mechanism from its enclosure. The medium light gray exterior and interior enclosing case with its modern design cover are designed to harmonize with almost any surroundings.

(Request Item No. D-34)

Leasing Industrial Trucks

A highly informative analysis of the "pros and cons" of industrial truck leasing is contained in a new 4-page folder released by The Elwell-Parker Electric Co. The folder details such topics as: "Effects On Working Capital," "Tax Considerations," "The Lease as a Hedge Against Inflation," "Write-Offs in Big Profit Years," "Leasing Vs. Borrowing Capital," "Short-Term Requirements," and many others. Included among the basic advantages of leasing as listed in the folder are: (1) the lease per-

mits using equipment when working capital is short; (2) the lease frees working capital for other uses which may be more important or more profitable; (3) return on freed capital often exceeds leasing interest charge; (4) leasing permits fast tax write-off; (5) leasing offers a hedge against inflation; (6) leasing permits 100% financing; (7) leasing permits tax write-off in big profit years; (8) the lease provides an operating budget control.

(Request Item No. D-35)

Water Treatment Equipment

A new bulletin discussing industrial waste treatment equipment is now available from Graver Water Conditioning Co. A concise discussion of the basic types of equipment available for treatment is included along with photographs of typical installations. The advantages of industrial waste treatment are also presented.

(Request Item No. D-36)

Foxboro Controller

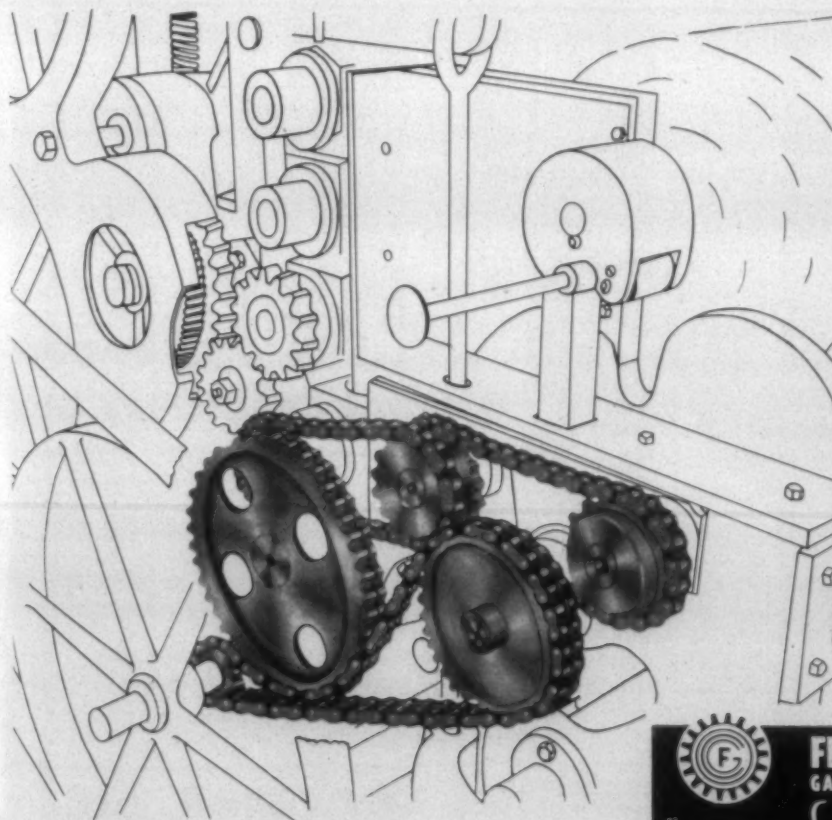
A new 12-page bulletin, 5A-13, issued by The Foxboro Co., describes in detail the company's new Model 41A pneumatic indicating controller, replacing the earlier Model 41 for control of process variables such as temperature, pressure, liquid level and humidity. New design features are fully explained, with emphasis on the longer, more readable indicating scale, extensive

use of high-quality control components and simplified maintenance. In addition to on-off control, the new instrument provides proportioning action adjustable from 1/4 of 1% to 25% of scale range, extending its field of industrial process application. The new proportioning mechanism is diagrammed and explained; typical applications are shown. Separate sections are devoted to temperature and pressure measuring systems, with information on the filled thermal systems available, temperature bulbs and accessories, new pressure elements, pressure seals and control valves.

(Request Item No. D-37)

Humphrey Manlift Elevators

A new 2-color, pocket-size folder has been released by the Humphrey Elevator Co., illustrating and describing the 4 standard models of Humphrey Manlift elevators. Humphrey Manlift elevators are power-driven, continuous belt-type with hand holds and steps at proper intervals to provide simultaneous up and down employee transportation with no waiting or delay. They are used in all multi-floor buildings where there is vertical processing of products and/or where frequent, quick inspection or servicing of machinery on various floor levels is required. They can be installed in new or existing buildings to service any number of floor levels at a fraction of the cost of conventional elevators, Humphrey reports; also, they require only a fraction of the space required for conven-



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tional elevators. In addition to application photos, the folder includes information on safety features required to comply with varying state codes and laws.

(Request Item No. D-38)

Maintaining V-Belt Drives

Dayton Rubber Co. has prepared a preventive maintenance manual for V-belt drives to assist the maintenance man in detecting trouble before it starts out. Here are a few of the manual's suggestions: Look and listen. When a V-belt is not functioning properly the fault usually can be heard or seen. For example, ticking, slapping sounds mean the belt is hitting the belt guard or some other obstruction. Unless corrected, the rubbing will wear out the belt cover rapidly. Bent or damaged belt guards may be responsible. When a V-belt squeals or howls, slippage is indicated. The belt is probably too loose or overloaded. To determine if belt tension is right, simply slap it. If it feels "dead," it is probably too loose. If it has no "give," it is too tight. But it is just right if it feels alive and springy. Other warning signs that can be easily spotted include sheave misalignment, worn or mismatched belts, oil or grease on belts, damaged or wobbly sheaves. The manual points out that the cost of replacing a V-belt usually is small, but prompt replacement can prevent production and labor time losses which might cost thousands of dollars.

(Request Item No. D-39)

Automatic Door Operators

The automatic door division of National Pneumatic Co. Inc. has published a booklet on its 2 new automatic door operators—Supermatic and Economatic. The first is a

compact, single-package, electro-hydraulic unit for front door installations. Economatic is a pneumatic operator for service, warehouse and other interior doors. Both units and their operations are completely described as well as illustrated with photographs and schematic drawings.

(Request Item No. D-40)

Boltless Steel Shelving

Klip-Bilt, boltless steel shelving erected at low cost without use of tools of any kind, is graphically described in a colorful 4-page brochure released by The Frick-Gallagher Mfg. Co. Illustrating the 3 types of simple clips used for all installations, the booklet shows how these clips are installed quickly and easily by hand to hold shelving pressure tight. Shown as an important and exclusive design feature of Klip-Bilt is the method by which shelf flange corners are gripped firmly against T-posts to prevent vibration and the possibility of sagging when shelves are heavily loaded. Several types of high-strength shelf construction designed to accommodate varying shelf loads from average to extra-heavy are also depicted.

(Request Item No. D-41)

Liquid Level Gauges

A new 26-page bulletin describing the complete line of liquid level gauges for indicating, recording, controlling and telemetering has been released by The Bristol Co. The well-illustrated, 2-color bulletin shows float-type, pressure-type, differential pressure-type and bubbler-type liquid and water level gauges—in strip and round-chart models. Air or electric controllers are available in several models. A new weather-proof case is shown for the 8" and 12" round chart recorders and controllers. These are designed for surface or pole mounting outdoors where the instrument will be exposed to all types of weather. Other new

features include Bristol's time-liquid level program controller, for raising and lowering the level of a given vessel according to a predetermined schedule and rate, and the new miniature graphic-panel Metagraphic pneumatic transmission instruments for liquid and water level measurements. Engineering data on the choice of the proper bulb and instrument for a given installation are presented, as well as installation information on liquid level telemetering and remote control. (Request Item No. D-42)

Wheel Goods Catalogs

The Colson Corp., wheel goods manufacturer, has published 3 new catalogs covering its industrial products. Publication of the new illustrated catalogs followed the acquisition last year by Colson of assets of Service Caster & Truck Corp. of Albion, Mich. The acquisition gave Colson one of the broadest lines of industrial material handling equipment in the country. One of the new catalogs covers several thousand different casters and wheels which Colson manufactures; another deals with Colson's wide variety of industrial trucks and trailers; and the third covers Colson's powered lifters, lift tables and lift trucks.

(Request Item No. D-43)

Heavy-Duty Electrical Conduit

National Electric Products Corp. has released a new booklet describing its heavy-duty, rigid steel electrical conduit, Superduct. In the booklet, the company has reproduced test data sheets compiled by independent Pittsburgh testing laboratories which show how the specially-protected conduit stands up under the corrosive attacks of salt spray, sulfuric acid, caustic soda and exposure to excessive heat as compared with another well-known conduit. Four-color photographs, showing the firm's new Superduct and the other specially pro-



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ected conduit, illustrate the effects on both after exposure to attacks listed above. Designed for installations in textile mills which have extreme moisture and heat conditions or are subject to corrosive attacks, Superduct is a well-known Sherardized conduit, finished with a special baked-on coat of vinyl chloride-acetate copolymer, pigmented and plasticized to develop exceptionally high corrosion-resistant properties. (Request Item No. D-44)

Lowell Tech Bulletin

Latest technical bulletin to be published from Lowell Technological Institute is *The Measurement of the Frictional and Fusional Properties of Textiles at High Sliding Velocities*, by Vasilis Lavrakas. The author is assistant professor in the department of textile chemistry and dyeing at Lowell Tech and project principal of the L.T.I. Research Foundation. His paper is a study of the lubrication of U. S. Air Force parachute fabrics in order to prevent the fusion and tearing of parachutes while in use and also concerns the development of a high-speed apparatus. (Request Item No. D-45)

G-E Control Devices

A new 68-page catalog of general purpose control devices, including a special section correlating by horsepower components for each type of motor control application, has been announced by the general purpose control department of the General Electric Co. Designated GEC-1260A, the 2-color publication contains photos, book prices, wiring diagrams and dimensions on motor starters, contactors, relays, solenoids, switches, push buttons and pilot devices. Also included is information comparing applications and merits of manual and magnetic control, and across-the-line and reduced-voltage control. The special section on control selection shows by enclosure, type and rating the exact components of motor control systems for each horsepower rating, including starters, push buttons, heaters, together with their numbers and book prices. Other data covers starter modifications, auxiliary interlocks and renewal parts. (Request Item No. D-46)

Surface Coatings

A revised 6-page illustrated bulletin entitled *Colloidal Graph for Surface Coatings and Impregnation*, has been published by Acheson Colloids Co. The bulletin describes how electric-furnace graphite of high purity, when processed to colloidal size and dispersed in a suitable carrier, is used effectively as a surface coating for many mechanical devices. Special dispersions of "dag" colloidal graphite for surface coating and appropriate methods of application are presented in the new bulletin. Also listed are many uses in which colloidal graphite is valuable as an impregnating medium for a variety of materials including textiles. The bulletin points out that "dag" colloidal graphite is chemically inert. Its insolubility in acids and alkalis prevents chemical reaction with corrosive materials and subse-

quent loss of lubricating ability. Resistant to oxidation at temperatures up to 500° C., it will reportedly withstand heat far better than ordinary petroleum lubricants, and is more heat-resistant than ordinary impregnants. Beyond the ignition points of the substances it is used to impregnate, it retains its characteristic properties. (Request Item No. D-47)

CB Self-Contained Boilers

A news tabloid presenting the CB models of self-contained boilers has been announced by the Cleaver-Brooks Co. The publication informally reviews the new CB

boilers with articles and comments from company officials. Illustrations include installations, demonstrations, cut-away view of the new CB boiler and plant facilities. Also included are articles on "Low Noise Level," "Operating Efficiency," "Boiler Survey" and engineering items of interest. (Request Item No. D-48)

Thermocouple And Pyrometer Supplies

A new edition of its 56-page Bulletin P1238 on thermocouples and pyrometer accessories has been published by The Bristol Co. The bulletin, a buyer's guide and user's manual, contains extensive engineering data

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on the selection and installation of the proper types of thermocouples, wells, head assemblies and other pyrometer accessories, as well as recommended thermocouples for specific installations. There are 165 photos and line drawings, illustrating products, suggested installation techniques and accessories, as well as thermocouple calibration tables based on the new N.B.S. Research Paper 2415 and Circular 508. Free copies are available. (Request Item No. D-49)

Protective Coatings

The Atlas Mineral Products Co. announces the availability of a new bulletin on protective coatings. Bulletin No. 7-2 devotes 2 pages to each of Atlas' standard coatings. Included in the bulletin are neoprene heavy-duty, neoprene extra-heavy-duty, styrene, chlorinated rubber and epoxy resin-based coatings. Atlas manufactures a complete line of corrosion proof cements, coatings, linings and rigid plastic fabrications, pipe and fittings.

(Request Item No. D-50)

Air Power System

A new engineering service bulletin—*A Better Air Power System*—has been released by Ingersoll-Rand Co. It points out that

power losses in compressed air lines are frequently as much as 30% to 50% and describes just how to go about finding out if more air is being wasted than the repair and renovation of the distribution system would cost. It then tells, step by step, the procedures to be taken to bring the system up to accepted standards. The 6-page booklet can also help in the design of new systems and contains diagrams of different types of piping networks and tables of friction losses of air in pipe, fittings and hose.

(Request Item No. D-51)

Liquid-Filled Thermostat

An illustrated brochure giving performance specifications and a complete description of its new Series 20,000 liquid-filled, local bulb thermostat has been prepared by the manufacturer, Fenwal Inc. This thermostat (adjustable over a standard range of 70° to 300° F., —50 to 200° F., or other ranges if desired) is designed to provide accurate control of process and oven temperatures at electrical loads up to 15 amps. An exterior-filled bellows assembly, a larger-than-average bellows travel, plus a 1¼" spacing between the top of the bellows and the head assembly are some of the design innovations that provide faster response and more accurate control than are obtainable from currently available liquid-filled thermostats.

(Request Item No. D-52)

gauge blocks. In 1907, a year after the establishment of the South Bend Lathe Works, the first edition of the book was published, containing only a few pages and illustrations. Each successive issue has been improved, revised and enlarged. For the past 47 years, the book has been used as a source of reference for the skilled machinist and a textbook for students. Editions have been published in French, Spanish, Chinese and Portuguese. The current edition is 8" x 5¼", has 128 pages and over 365 illustrations. There are 11 chapters clearly written in non-technical language making it easy for the beginner to understand. The text covers such items as the correct installation and leveling of the lathe, grinding cutter bits, turning, boring, thread cutting, taper turning, drilling, reaming, tapping, machinability ratings and cutting speeds for various kinds of steels; standard tolerances for press fits, running fits, push fits and sliding fits; allowances for finish turning, filing, polishing, grinding, reaming, lapping and honing; and tooling dimensions for South Bend lathes. The book is available in paper binding at 50c or in imitation leather fabrikoid binding at \$1.50 a copy postpaid. For further information, write to South Bend Lathe Works, South Bend 22, Ind.

Supervisory Development Service

The American Management Association announces a new service designed to help industry develop a better supervisory force. Initial issues of the periodicals that will make up the service are scheduled for publication next month. Available on a subscription basis to both members and non-members of the association, the publications will total about 1,400 pages a year. They include a monthly 8-page bulletin (*Supervisory Development Today*), an 80-page monthly manual (*Supervisory Development Sourcebook*) and semi-annual research reports. The association points out that the supervisory development service is not directed to foremen and their counterparts, but to line and staff executives with responsibility for any phase of first-line supervisory development. Additional information may be obtained by writing the director, Supervisory Development Services, American Management Association, 330 W. 43rd St., New York 36.

A Company Guide To The Selection Of Salesmen

(By Milton M. Mandell, chief of the management testing unit, Standards Division, U. S. Civil Service Commission; published by the American Management Association, 330 W. 43rd St., New York City; Research Report No. 24; cloth-bound, 160 pages; price \$3.50 to A.M.A. members, \$4.75 others).

This report discusses and analyzes the current practices of 180 manufacturing firms of diverse interests to demonstrate how they operate in the selection of their sales forces, the reduction of sales staff turnover and the improvement of sales performance.

A List Of American Standards

The American Standards Association has announced publication of the 1955 edition of *A List of American Standards*. The 48-page publication lists and indexes about 1,500 American standards. Included are 165 textiles and wearing apparel, 210 for construction and civil engineering, 153 mechanical, 272 electrical, 158 safety, 10 office equipment and supplies, and a miscellany of others. Free copies are available from the association, 70 E. 45th St., New York 17.

How To Run A Lathe



South Bend Lathe Works has announced publication of the 53rd edition of the book *How To Run A Lathe*. New material published for the first time in this edition covers the use of toolmaker's buttons for locating work on the lathe face plate, the use of the steady rest, follower rest, internal grinding attachment and precision

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National Aniline To Build Major Isocyanates Plant

National Aniline Div., Allied Chemical & Dye Corp., has announced plans for the construction of a multi-million dollar plant to produce organic isocyanates at Moundsville, W. Va. The new plant will be a completely integrated organic isocyanates facility, with all chemical raw materials supplied from within the Allied Chemical organization. National Aniline expects to complete the plant in early 1956. The plant has been planned for production of a varied line of isocyanates, including the di-isocyanates of toluene (TDI), di-tolyl (TODI) and diphenylmethane (MDI), which are currently being supplied from National Aniline's interim commercial production at Buffalo, N. Y. Located on the Ohio River, just south of Moundsville, the isocyanates plant will adjoin Solvay Process Division's new chlorine, caustic soda and chlorinated methanes plant and National Aniline's recently completed maleic anhydride, fumaric acid and catalytic aniline operations. The plant will have facilities for shipping by river barge, railroad and truck. Organic isocyanates have recently emerged as a broad new class of synthetic organic chemicals with important, large-volume potential as raw materials for the manufacture of improved synthetic rubbers, resins, plastics, adhesives, surface coatings and fibers. In addition, their unique reaction characteristics add a wealth of new possibilities for improved products important to the textile and apparel industries. The new facilities will establish National Aniline as a major producer of isocyanates for manufacturers of polyurethane products. National Aniline plans also to provide a full range of coloring materials so that the new foams and other polyurethane products may be produced in desired colors.

Sjostrom Machine Co. Opens Florida Plant

One of the most modern machine shops and assembly plants in the South has been opened in Boca Raton, Fla., by Sjostrom Machine Co., formerly located in Lawrence,

Mass. The plant contains some 20,000 sq. ft. of floor space. The firm was founded by the grandfather of the present owner in 1880 and has been located at Lawrence until recently when the entire plant, equipment and officers were moved to Boca Raton. As far as is known, the Sjostrom plant is the first textile machinery manufacturing plant ever to locate in Florida. Sjostrom manufactures folding, cutting and stacking machines for textile articles of all sizes, from dish towels to bed spreads. Some 20 persons are employed at the plant.

Collins Bros. Machine Co. Announces Reorganization

Benjamin F. Collins, vice-president and part owner of Collins Bros. Machine Co., Pawtucket, R. I., has retired after 50 years with the firm, and his interest in the company has been acquired by Henry Collins of Pawtucket and Karl H. Inderfurth of Charlotte, N. C. The company is one of the oldest builders of textile machinery in the U. S., having been established in 1866. Its principal line of manufacture is ring twisting equipment for all phases of the textile industry. Officers are Henry Collins, president and treasurer; Mr. Inderfurth, vice-president, and Henry Crowe, secretary. In addition to the officers, the firm's board of directors includes George Dombhart of Dombhart & Holden, Charlotte, and William Morley, president of Narragansett Wire Co.

Perfecting Service Buys Precision Gear & Machine

Perfecting Service Co. of Charlotte, N. C., announces the recent purchase of the Precision Gear & Machine Co. of Charlotte. Perfecting Service will continue the operation of Precision under its present name and location as a division and wholly-owned subsidiary. All the present employees will remain with the company. Additions to the staff include C. B. Bookout, sales manager, and Everett Allen, plant manager. The officers of Perfecting Service, Edwin C.

Shaw, president, Harmon L. Shaw, vice-president, and Van Lee Shaw, secretary and treasurer, have replaced the former officers and directors. Precision has been a leading manufacturer of gears, transmissions and bearing equipment for the textile industry throughout the Southeast for over 27 years. Perfecting Service manufactures a number of industrial products such as the Rotary Union, a patented rotating steam connection for textile machinery, and other industrial processing equipment including Universal steam traps, air control equipment, quick couplings and flexible metal hose.

Psychological Services Offered By Atlanta Firm

A group of professional psychologists have founded Psychological Services Associates Inc. at 522 Peachtree Bldg., Atlanta, Ga., to provide industry of the Southeast with a wide range of professional psychological services. The purpose of the organization is to make available, as a supplement to sound management practices, the results of recent scientific advances in the application of psychological techniques and methods to industry problems. The organization consists of 2 divisions, industrial services division and educational services division. Services offered by the industrial division include: personnel selection, employee training, merit rating programs, employee attitude surveys, job evaluation, leadership training and market research.

Dodenhoff Named Exclusive Agent For Beetle Boat Co.

W. D. Dodenhoff Co., Greenville, S. C., has been given the exclusive distributorship of the textile products manufactured by Beetle Boat Co. of New Bedford, Mass. Beetle manufactures a complete line of textile trucks, doff boxes, tote boxes, fiberglas vats, crocks, tubs, etc. The distributorship applies not only to the South, but to the entire U. S. and Canada.

Kearny Reopens Office In Greenville, S. C.

Kearny Mfg. Co. Inc. has announced the reopening of its Greenville, S. C., office. The office has been closed due to personnel reasons. Kearny manufactures Hygrofit, the yarn conditioning chemical, and machinery for the application of Hygrofit. The company also manufactures Pluramine for the wet processing of textiles.

Avisco Plans Expansion Of Rayon Staple Output

American Viscose Corp. plans to expand its rayon staple output by 90 million pounds



New home of Sjostrom Machine Co. at Boca Raton, Fla.

year, according to Harry L. Dalton, vice-president in charge of sales. The increased production will go into effect at the corporation's Front Royal, Va., and Parkersburg, West Va., plants and will be available in 1956. With the added capacity at Front Royal and the 50 million pounds of annual carpet staple production planned for Parkersburg, Avisco's total rayon staple output will be more than 300 million pounds.

Ivey Chemical Co. Formed At Greenville, S. C.

Jasper W. Ivey, vice-president and director of sales of The Moreland Chemical Co., has resigned his position to organize the Ivey Chemical Co. at Greenville, S. C. A modern warehouse, to be occupied by the new company, is now under construction by Daniel Construction Co. on property near the Laurens highway and by-pass highway No. 291. It is expected to be completed before June 1. The new firm will distribute a complete line of industrial chemicals, principally for use in textile processing and water treatment.

Hoffman & Hoffman Named Sarco Agent

Sarco Co. Inc. has appointed Hoffman & Hoffman Co. its sales representative in North and South Carolina, replacing Royster H. Johnson & Co. Hoffman & Hoffman has offices in Greensboro and Raleigh, N. C., and Columbia, S. C.

Owens-Corning & Armstrong To Offer Fiberglas Product

The full line of Fiberglas industrial insulations made by the Owens-Corning Fiberglas Corp. will also be produced for the Armstrong Cork Co. which will market them under the trade name, Armaglas, according to a recent joint announcement by the 2 companies. The arrangement was entered into by Armstrong in order to take advantage of the unusual properties of Fiberglas industrial insulations and thus serve its customers more effectively; and by Owens-Corning to make its materials more readily available to an increasing number of users.

While basically the Armaglas products will be the same as those marketed by Owens-Corning, the firm has agreed to manufacture the Armaglas materials to Armstrong's specifications.

American Cyanamid Opens New Process Facilities

The installation of special facilities which can produce a wide range of chemical compounds and embody numerous different processes has been announced by Kenneth C. Towle, president of American Cyanamid Co. "These highly versatile facilities," Mr. Towle said, "are designed to help solve some of the most difficult problems in the chemical industry. They will assure our customers of a dependable source of larger-than-usual quantities of new chemicals which have not yet become commercial, and

provide a means for evaluating such products in terms of their long range commercial possibilities. They will shorten the time required to bring a product from the research laboratory into profitable commercial production; will permit important economies in introducing new products to industry; and will minimize the risk which management takes when it decides on plant additions to produce new products."

Normally, Mr. Towle explained, when a chemical is born in the research laboratory, and a process for making it is developed, limited quantities are manufactured in a small pilot plant and sent to potential customers for evaluation. Then, as possible end-uses for the product are developed, the demand increases, over-loading the pilot plant facilities, but not quite justifying construction of a commercial plant. The new facilities will produce quantities sufficiently large to meet this medium-scale demand, thus enabling other industrial companies to proceed with their own development programs with assurance of adequate supplies.

The facilities are divided between the company's plants at Bound Brook, N.J. and Warners, N.J. The Warners installation includes general manufacturing facilities and at Bound Brook is located equipment for

hydrogenation and other high pressure reactions.

National Vulcanized Fibre Retains Design Consultants

National Vulcanized Fibre Co., Wilmington, Del., has retained Donald Deskey Associates, New York industrial design consultants, to conduct a long range program of product research and development. National, the world's largest producer of vulcanized fibre, manufactures the Kennett line of material handling receptacles.

Cotton Insurance Assn. Marking 50th Anniversary

The Cotton Insurance Association of Atlanta, Ga., oldest organization of its kind in the U. S., is currently observing its 50th year of continuous operation. Since Sept. 1, 1905, the association has specialized in writing reporting forms of insurance for cotton merchants, compresses, warehouses, railroads and others. The primary purpose of the association is to make available to local agents reporting policy forms, thus providing limits of liability beyond the capacity of individual companies.



OLD DOMINION BOX CO. WASN'T OLD AT ALL when this picture was taken at the company's first plant at Lynchburg, Va. The firm, now marking its 50th anniversary, started out in 1905 with 25 employees and one customer—Craddock-Terry Shoe Co. As the South grew and diversified, so did Old Dominion. Led by young Dave Dillard (first man in left foreground) who started with the company at the age of 16, the company began making boxes for hosiery manufacturers, then candy, furniture, tobacco, textiles, frozen foods, soft drinks, nose drops, etc. This growth saw the company expand into North Carolina, with plants at Asheboro, Burlington, Charlotte and Winston-Salem. In 1937 plants were opened at Martinsville, Va., and Kinston, N. C. Last year another plant was opened in Kinston. The Asheboro plant was closed in 1945, but the same year a folding box plant was opened at Conover, N. C. Today, with Mr. Dillard's son—Edwin S.—as its president, Old Dominion has nine plants, with another on the drawing board for Lynchburg in 1956. Included in this chain is a subsidiary, The Palmetto Box Co. of Greenville, S. C., with plants at Greenville and Vidalia, Ga. Still very active is Dave Dillard, chairman of the board of Old Dominion and a member of the following boards: Craddock-Terry Shoe Co. (still a very important Old Dominion customer), Lynchburg National Bank & Trust Co., Quality Dairy, Lynchburg Livestock Market, Bottled Gas Co. and Dillard Paper Co. J. L. Peak, one of the original 25 employees, is now an Old Dominion vice-president. Other officers of the company include E. T. McCorkle, executive vice-president, Charlotte; Ivan D. Wood and W. T. Buice Jr., vice-presidents, Charlotte; W. G. Terry and W. C. Pritchett, vice-presidents, Lynchburg.

textile bulletin

Publisher DAVID CLARK
Editor JAMES MCADEN JR.
Associate Editor JACK KISSIAH
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Assistant Editor R. H. HOOD
Inquiry & Reader Service EMILY KERNS

TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, \$1.50; three years payable in advance, \$3.00;

TEXTILE BULLETIN IS PUBLISHED MONTHLY BY

CLARK PUBLISHING COMPANY

P. O. Box 1225 • CHARLOTTE, N. C. • Telephone ED 3-3173

— Offices and Plant: 218 West Morehead Street, Charlotte 6 —

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one year, Canada, \$3.00; one year, other countries in Postal Union, \$5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

Real Interest, Or Lip Service?

"Research" is one of those words which gets kicked around in our industry by a lot of well-meaning folks who are full of well-meaning talk. We won't deny them the privilege of conversation, for it is possible—just barely—that by wallowing around in a morass of vocal confusion they might ultimately convince themselves. But, regrettably, most of them are like the folks who readily agree that the church needs a new roof but ain't willing to raise their own pledge.

What got us off on this track, we reckon, was the rash of meetings this Spring to which all elements of the textile industry have been exposed. Almost without exception these meetings have had some degree of the "research" treatment. We can picture the steering committees facing up to the job of trying to arrange a well-rounded program, to wit: "Well, we've got this fellow coming from Washington with the international approach, and that department store man can tell us something about marketing. Most everybody will be leaving for home before the final session, so let's get somebody to talk on research Saturday, and if anybody is sufficiently interested they will make it their business to stay to hear him." Those that do stay always say they are impressed by the research fellow, but usually walk out mumbling something along the lines of "Well, he might have something, but I don't think it will work in my mill. But don't misunderstand me, I think research is a *good* thing."

The textile industry has some interesting side-line critics. Among them is the Hon. Kerr (pronounced car) Scott, junior United States Senator from North Carolina. The Senator is better known for his farming ability than he is for business acumen; currently he isn't pleased with the way the textile manufacturing industry is approaching the problem of raw cotton surpluses. You see, don't you, that it's

now our problem, since statesmen like him have encouraged farmers to grow more of the stuff than can be used by continually guaranteeing to bail them out.

And then we have another eminent public figure, likewise a Southern member of the exclusive club on Capitol Hill—Sen. Allen J. Ellender of Louisiana. Now, *he* is adroit. He figures that the Southern textile industry will not be injured by adoption of the reciprocal trade program which the House of Representatives approved and sent to the Senate for mulling over. He says that "an import duty which might be high enough to protect the Southern textile industry could well be too low to protect Northern mills . . . While I can sympathize with those who are Northern textile workers, I do not feel that our country can continue to subsidize an industry which has patently become uneconomical. This is one time that we must 'balance the equities'." If you can overlook this Senator's trite phraseology, his remarks boil down to about this: "Hold on, boys, don't let them trade associations get you excited about H. R. 1. I'm going to vote for it, since there ain't but three or four textile mills in Louisiana, but don't you Southerners get too riled at me because won't nothin' but Yankee mills be hurt anyhow. Now, just in passin', I thought I'd mention to you a little ole waterway project we badly need for the Overton Red River down in Louisiana; I'm sure you can give me your vote on that."

But fiber surpluses and foreign trade are, for the purposes of this writing, remote. Research, however, was the topic of another textile industry platform essayist—Gen. Georges F. Doriot, Harvard University professor of industrial management. The general-professor might well be off-base when it comes to evaluating the sociological and mechanical progress of the textile industry (Spencer Love has something to say about this elsewhere in this issue). He sounded like he might have dropped his peppermint candy in gravel when

he accused the industry's top management of spending the Winter in Florida and the Summer in Maine. We have no more personal knowledge of the general than we do of the Senator from Louisiana. We suspect that the now-professor, released from the quietus of a military career, rather has a zest for the intellectual freedom of liberal arts college activity, and thus is inclined to make rash statements in order

to get attention. We must concede, however, that his experience with Quartermaster Corps research and development during the last war might have given him some knowledge of fibers and fabrics.

Perhaps you don't like some of the things that Professor Doriot said. Maybe it's like an in-law telling you your grass needs cutting. But, however badly phrased, remarks such as the professor's might stimulate more executives in the industry to get behind research, not just with money but with work and thinking as well.

TEXTILE INDUSTRY SCHEDULE

— 1955 —

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textile bulletin

Publisher DAVID CLARK
Editor JAMES MCADEN JR.
Associate Editor JACK KISSIAH
Assistant Editor ANDREW HEWITT
Assistant Editor R. H. HOOD
Inquiry & Reader Service EMILY KERNS

TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, \$1.50; three years payable in advance, \$3.00;

TEXTILE BULLETIN IS PUBLISHED MONTHLY BY

CLARK PUBLISHING COMPANY

P. O. Box 1225 • CHARLOTTE, N. C. • Telephone ED 3-3173

— Offices and Plant: 218 West Morehead Street, Charlotte 6 —

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one year, Canada, \$3.00; one year, other countries in Postal Union, \$5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

Real Interest, Or Lip Service?

"Research" is one of those words which gets kicked around in our industry by a lot of well-meaning folks who are full of well-meaning talk. We won't deny them the privilege of conversation, for it is possible—just barely—that by wallowing around in a morass of vocal confusion they might ultimately convince themselves. But, regrettably, most of them are like the folks who readily agree that the church needs a new roof but ain't willing to raise their own pledge.

What got us off on this track, we reckon, was the rash of meetings this Spring to which all elements of the textile industry have been exposed. Almost without exception these meetings have had some degree of the "research" treatment. We can picture the steering committees facing up to the job of trying to arrange a well-rounded program, to wit: "Well, we've got this fellow coming from Washington with the international approach, and that department store man can tell us something about marketing. Most everybody will be leaving for home before the final session, so let's get somebody to talk on research Saturday, and if anybody is sufficiently interested they will make it their business to stay to hear him." Those that do stay always say they are impressed by the research fellow, but usually walk out mumbling something along the lines of "Well, he might have something, but I don't think it will work in my mill. But don't misunderstand me, I think research is a *good* thing."

The textile industry has some interesting side-line critics. Among them is the Hon. Kerr (pronounced car) Scott, junior United States Senator from North Carolina. The Senator is better known for his farming ability than he is for business acumen; currently he isn't pleased with the way the textile manufacturing industry is approaching the problem of raw cotton surpluses. You see, don't you, that it's

now our problem, since statesmen like him have encouraged farmers to grow more of the stuff than can be used by continually guaranteeing to bail them out.

And then we have another eminent public figure, likewise a Southern member of the exclusive club on Capitol Hill—Sen. Allen J. Ellender of Louisiana. Now, *he* is adroit. He figures that the Southern textile industry will not be injured by adoption of the reciprocal trade program which the House of Representatives approved and sent to the Senate for mulling over. He says that "an import duty which might be high enough to protect the Southern textile industry could well be too low to protect Northern mills . . . While I can sympathize with those who are Northern textile workers, I do not feel that our country can continue to subsidize an industry which has patently become uneconomical. This is one time that we must 'balance the equities'." If you can overlook this Senator's trite phraseology, his remarks boil down to about this: "Hold on, boys, don't let them trade associations get you excited about H. R. 1. I'm going to vote for it, since there ain't but three or four textile mills in Louisiana, but don't you Southerners get too riled at me because won't nothin' but Yankee mills be hurt anyhow. Now, just in passin', I thought I'd mention to you a little ole waterway project we badly need for the Overton Red River down in Louisiana; I'm sure you can give me your vote on that."

But fiber surpluses and foreign trade are, for the purposes of this writing, remote. Research, however, was the topic of another textile industry platform essayist—Gen. Georges F. Doriot, Harvard University professor of industrial management. The general-professor might well be off-base when it comes to evaluating the sociological and mechanical progress of the textile industry (Spencer Love has something to say about this elsewhere in this issue). He sounded like he might have dropped his peppermint candy in gravel when

he accused the industry's top management of spending the Winter in Florida and the Summer in Maine. We have no more personal knowledge of the general than we do of the Senator from Louisiana. We suspect that the now-professor, released from the quietus of a military career, rather has a zest for the intellectual freedom of liberal arts college activity, and thus is inclined to make rash statements in order

to get attention. We must concede, however, that his experience with Quartermaster Corps research and development during the last war might have given him some knowledge of fibers and fabrics.

Perhaps you don't like some of the things that Professor Doriot said. Maybe it's like an in-law telling you your grass needs cutting. But, however badly phrased, remarks such as the professor's might stimulate more executives in the industry to get behind research, not just with money but with work and thinking as well.

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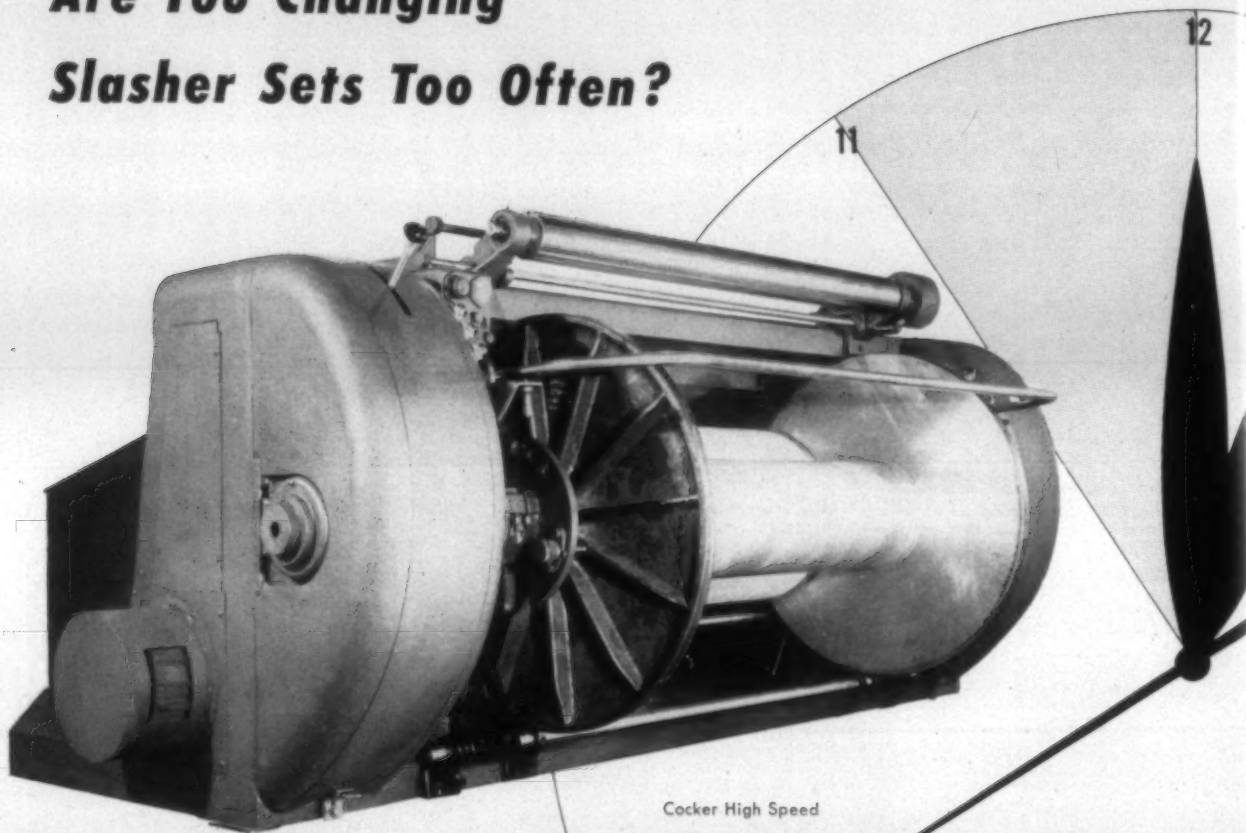
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Warper for Cotton

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WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE
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textile bulletin

VOL. 81

APRIL 1955

NO. 4

Some New Looks At The Textile Picture

By SPENCER LOVE, President and Chairman of the Board, Burlington Industries



The president and chairman of the board of Burlington Industries usually keeps himself busy enough to avoid the banquet circuit. When he does speak in public it's worth noting. Here are some of his comments in re the Southern textile industry, delivered last month before the annual meeting of the Spartanburg (S. C.) Chamber of Commerce.

RECENTLY Professor Doriot of the Harvard Business School made a critical speech in New York, accounts of which appeared in the newspapers, to the effect that the textile industry was senile, inbred and backward. I am afraid that this distinguished professor, like too many of his Boston contemporaries, does not extend his sights and contacts beyond the confines of New England. He should take a few days off and visit the Carolinas and see what has happened during the past 20 years. Gone are nearly all the dilapidated shacks down by the rivers known as company-owned mill villages, without heating and under-pinning, and serviced by the one company-owned store. Some of you must remember the plumbing which often consisted of one outdoor spigot for four houses, with unsanitary outdoor privies nearby. In their places are neat homes, many owned by employees themselves, warm, comfortable and equipped with all types of modern conveniences. Nearly every house has television and a garage with one, sometimes two cars. Wages have more than quadrupled, and though the cost of living has also risen, the margin or real wage has increased enormously. The base work week has been reduced from 55 or 60 to 40 hours.

Plants are infinitely better lighted and many of them now are air-conditioned; modern devices also remove a large part of lint and other unhealthy substances from the air. Our people, who 25 years ago were poorly clad and rarely with schooling beyond the primary grades, are now well dressed. They are mostly high school educated and active in their communities. Our young men in the plants are clean looking, alert, and intelligent; our girls are beautiful and likewise alert and intelligent. Our machines are mostly new or completely rebuilt. They have far greater productivity potentials, turning out better qualities much faster and arranged for improved efficiencies and flow of work; a great deal of economical integration has taken place and we have many new machines that perform miracles unheard of 25 years ago.

Meanwhile our communities have built up roads, schools, parks, golf courses and numerous other improvements for the comfort and edification of our population.

King Cotton can hardly recognize himself today in his beautiful new fabrics which are responding to the touch of improved machines and processes, better finishes, new methods. Or if Professor Doriot as a resident New Englander is interested mainly in the wool and worsted end of textiles, let him come and see our new one-story, air-conditioned, streamlined worsted plants in comparison to the shaky, multi-story, badly-laid-out buildings of New England; or our prosperous-looking homes in contrast to the rickety tenements of so many of New England's industrial centers. He should also come to see the new wool combing plants that are going up on our East Carolina rivers, with efficiencies, utilities, and employee comforts undreamed of only a few years ago—plants so modern and revolutionary that experts from all over the world are traveling from abroad to see them.

If it is lack of opportunity in the industry that our Harvard observer deplors, again I strongly feel that he needs to look around. I could introduce him to hundreds of bright young men, in both small and large enterprises all over the industry, who have done outstandingly constructive jobs in the last decade, and many of them are well on the way toward achieving complete economic security for themselves in so doing. I know of no industry in the country which has offered and does offer such fine opportunity to young men who are willing to start at the bottom and work hard. Certainly there are few where the pathway to success has been as fast as in our textile industry. Since World War II, I think the generation which had the maturing values of military experience has already given a tremendous account of itself. I am an optimist; I think our rising younger executives look far better than my generation did at their age, and that insofar as growth and new developments are concerned American industry has only begun to show what can be done. We are fortunate to be living in a dynamic age.

So may I again say that I hope our academic critic will put on his spectacles and take a closer look. It is disturbing that Professor Doriot, an eminent Harvard faculty member, should reveal such gross ignorance of the greatest revolution the textile industry has ever known, one which is taking place before his and our very eyes. And please don't think from what I say that I am by any means complacent and that we have not been and will not be continually working hard to improve ourselves. We know from experience in a

highly competitive game that if we don't keep striving and improving as hard as we can, we can't survive.

I am happy to say that after nearly two years of shrinking activities and poor prices there has been some improvement over the last six months. The outlook is considerably brighter than a year ago. Many people have wondered why the textile industry had seen somewhat reduced activities over the last two years, with the best stocks selling way below book value and dividends often being reduced, while most other industries have shown forward progress. One of the best answers I can find to this question lies in the fact that the government was buying a huge volume of textiles in the post-Korean period but has bought little or no textiles over the last two years. Thus the industry suddenly lost a customer for nearly 20 per cent of its volume without anything to replace it. At the same time, there has been some increased flow of imports into the country from all over the world, though I do not believe this has been any serious factor as yet.

The flow of imports could be very serious indeed if any further adjustments were made in our import tariffs. Since there has been much discussion on this subject in Washington, the industry has naturally been alarmed and aroused.

Wages paid workers in textile and similar industries in other countries of the world range from one-tenth to one-half of wages in this country; thus other countries which have access to equally good machinery, the same raw materials, and work longer hours are in position to undercut us very seriously if the tariff bars are let down. This is particularly true as to Japan and in Europe where, under the Point Four programs of the post-war era, there has been a great deal of technical exportation of our "know-how" and thus there has been enormous improvement in the productivity and quality of fabrics in these countries over past performances.

The textile industry feels that it is an essential one. It feels that to keep its employment up and its factories going it is necessary that there be a tariff protection up to and including the amount of the wage differential, whatever that is. In my opinion the industry will never ask or expect to get more protection than this. If this amount of protection is not available, not only for the textile industry but for all industries where know-how, raw materials, and machinery are available abroad, we will gradually be forced to lower our standard of living in America to the average level of other countries with which we compete. Companies like Burlington Industries would be forced to operate factories in England, Europe and Japan, and gradually shut down our domestic factories. We do not think that this would be a good thing for America. We do not think it would be a good thing for the world, because America, with its vast technological programs of advancement and its high standards of living, sets an enviable pace and gives the whole enlightened world a target to shoot at.

So if you folks don't want to see your principal industry seriously jeopardized, but rather want it to grow and expand, and want your people to continue to make the wages they have been making or better wages, you should help us persuade our legislators and administrators not to tamper too much, if at all, with textile tariffs.

Another serious problem that constantly faces textile manufacturers is the attitude and policies of labor unions. No one can question the basic rights of individuals to join

or not to join any group, organization or union as they see fit. But in the history of the textile industry what might have been the good purposes and aims of collective action appear to have been submerged by the practices of the textile unions. You may ask what has happened in actual practice. I would like to point out how dangerous these practices have been and how they have virtually destroyed the industry in those areas where the present unions have been able to attain a strong foothold.

To begin with, once a union is ready for a campaign, too often the usual start is to attack those firms in the industry who are paying the best wages and giving the highest benefits. Since it is a highly competitive industry, such attacks are not only unfair but generally result only in unemployment and misery for all concerned. No company can long afford to pay much higher wages or give much greater benefits than its competition.

At this point I would like to state that many of the broad benefits which have come to textile industry workers over the years have been through legislation. This, of course, is not to discount or minimize in any way the corresponding broad benefits brought to workers by progressive and forward-looking management. For example, it has been legislation which has set fair minimum wages; and higher minimums are being considered in Washington today. The 90-cent minimum hourly wage proposed by President Eisenhower is, I believe, being supported by the majority of leaders in the textile industry. Other benefits which have come in over recent decades through legislation are shorter hours, elimination of child labor, learner pay, social security, workmen's compensation, unemployment compensation, and the like. It has always seemed to me fair to make such generally applicable and basic progress through legislation, which is fair to everyone in that it applies to everyone, rather than through stirring up strife within selected companies in the industry, such as the unions have indulged in.

And I do not need to spell out what I mean by union-induced strife. For several days now the front page of your daily newspaper has been telling you this story, in connection with the current telephone and railroad strikes that grip the South. Violence traditionally follows union strikes. Sabotage, as in the form of severed long distance cables reported by the press, has come to be something of an accepted pattern. Destruction of expensive equipment is usually followed by gunfire, bombings, and other forms of violence that are shocking to fair-minded men and women of integrity and character.

Another unsound basic policy of labor unions in the South appears to have been to generate and breed distrust and hatred between employers and employees. Union leaders have resorted to reprehensible tactics to destroy the confidence of workers in management. They have made completely unjustified attacks on management time and again, many of which were not based on correct facts. No industry, no company, no team can ever make substantial progress unless a spirit of confidence and a desire for cooperation for the mutual benefit exists between management and workers.

Also, labor unions have constantly fought technological progress. Any child can determine, as I have pointed out, that better working conditions and other beneficiary influences in our factories have constantly improved over the last two decades. But as better machines and better processes have been introduced, the labor unions have consistently raised false cries, emphasizing such expressions as "Stretch-

out," "Exploitation," "Slave Labor," "Machines Driving People into Unemployment," etc., etc. Where the unions have had a strong foothold, they have time and again opposed and blocked modernization and progress, including installation of improved machines and methods. They have kept management executives constantly tied up in useless wrangles over trivialities. They have insisted on seniority ahead of efficiency. All this has meant that those companies where the unions had footholds were bound to fall by the wayside sooner or later. The history of the industry and the history of America have proven how badly wrong the unions have been with such short-sighted policies. The facts have been that the development of new machines and technological progress, instead of eliminating jobs, have created new jobs through the ability to bring better and better products to the consumer at lower and lower prices.

One of the most objectionable features of unions in actual practice, as distinguished from theory, is the extent to which union leaders tend to place their own interests above the interests of the employees whom they purport to serve. One of the principal and most obvious illustrations of this is to be found in what is called compulsory unionism. That is a subject which has come considerably to the forefront in recent months as a result of the very strong attacks that are being made by the union leaders upon the so-called "right-to-work" laws of various states, of which incidentally South Carolina is one. In such attacks these leaders are in a most indefensible position. They insist that no State should enact laws of the right to work type, yet these laws do no more than preserve for every individual his right to join or not to join a union as he sees fit. The leaders insist rather that wherever they can obtain an arrangement for compulsory unionism they should be allowed to obtain it, regardless of the individual employee's rights in the matter, and to require the employee to join their union, pay allegiance to them—and money too—in order to work.

Finally, unions have not put accurate facts before our employees. For example, they have time and again come South and pictured Northern union workers as much better off and as living under better conditions than our Southern workers. This has been an incorrect picture in that the unions have invariably distorted and confused their figures by comparing the Northern mills, which now on the whole run on finer types of goods requiring higher skills, with Southern mill averages which have been heavily weighted by those plants making staple or coarser merchandise requiring far less skill.

Whatever real differentials may have existed have been to a considerable extent no greater than the actual cost-of-living differentials between the areas. There have been a few isolated spots in New England where wage rates have been still higher than the norms in New England itself. In those instances the companies concerned have been going broke fast and many of them today are in process of liquidation. The average New England textile worker has been a very unhappy person over the past ten years, with the number of available jobs constantly shrinking with short-time prevalent in most areas, with living conditions infinitely less desirable than in the South, and with company after company going out of business completely. I know of these things first-hand because I spent 22 years of my life living in New England, graduating from high school and Harvard there, and I have seen these processes of dry rot developing slowly but surely year after year, fostered and fed by the policies of the labor unions.

Summarizing again conditions in the industry, I might repeat that there has been for many in the industry a good improvement in business over the past six months and Spring prospects today are better than they were a year ago. We feel we now have just about overcome the slack which the withdrawal of government purchasing gave us, and are rapidly getting in shape to equal performance of other industries where, to a considerable extent, the defense program has continued furnishing a substantial backlog. An industry leader, however, faces a constant battle with competition, world markets, uncertainty of government policies, unwarranted attacks from labor leaders, and the changes of fickle fashion. There is in my opinion no industry in the world where competition is keener and more active than our American textile industry, primarily because there are literally thousands of establishments and even the largest companies do not constitute over two or three per cent of the total. In spite of all these problems, I predict that the industry will continue to grow and develop in service and importance, and I feel that Spartanburg County will never be unhappy that it has its textile industry as a substantial core and backlog of its industrial program.

Bearing in mind all these objectives and the almost certain growth and development that is ahead, we hope to share with you in the continued happiness and prosperity of this Heaven-blessed area. The future is yours; if you can understand clearly what makes for prosperity and growth, and what you have to do to obtain it and keep it secure, there can be no limit to or question about the successful outcome.

A Merchant Looks At The Textile Industry

By T. V. HOUSER, Chairman of the Board, Sears, Roebuck & Co.

THE cotton goods industry is faced with a unique problem as a processor of basic commodities. While almost all other manufacturers are able to buy their raw material in a market where economic forces of supply and demand dictate the price, you must buy your raw material in a market where the effect of supply and demand have been minimized by the actions taken by the Government to solve a social and political problem.

Cotton growing has been affected to some degree by the

revolutionary changes in agriculture wrought by mechanization. There has been a steady reduction in the number of farm workers and a corresponding increase in the number of non-farm workers. Thirty years ago, 277 man-hours were required to produce a bale of cotton. Today the same bale of cotton can be produced in approximately 175 man-hours. Agricultural experts estimate that when the mechanical equipment currently available is widely applied in cotton farming, only 65 hours will be needed to produce a bale of

From a successful retailer come these comments about raw cotton, the relation of raw material processing to supplying of goods, textiles' share of the consumer dollar, industry integration, research and imports. They were delivered at the annual meeting of the American Cotton Manufacturers Institute, held March 31-April 1 at Palm Beach, Fla.

cotton. The revolutionary changes in agriculture have occurred almost too rapidly, and, as a result, many people have been unable to make a suitable adjustment. The farm support program is designed to soften the effect of the agricultural revolution upon farm units unable to make efficient use of modern mechanized methods. Whether or not the support plan gives unwarranted support to the efficient mechanized producer is not the point of this discussion. The fact remains that you must buy raw material in an artificially supported market. In a retailer's language, cotton, your raw material, is "fair-traded."

We all know that cotton is a large element in the cost of finished piece goods, but a relatively small part of the cost of a finished garment. I had our buyers take a few typical items to see the effect of a ten-cent per pound difference in the price of raw cotton. The prices of typical men's and women's garments would be reduced at the retail counter by five to ten per cent—articles like sheets and towels by 15 per cent. While these differences are comparatively small, I have watched the ebb and flow of consumer buying for enough years to know that if cotton goods could sell for five to 15 per cent less, in comparison with the average of all other consumer goods products, that you would have a somewhat larger market than you have today. In other words, if consumers had the benefit of whatever the difference would be between the supported cotton market and the free market, you would have a greater consumption of your cotton goods.

In my opinion you would also have a better profit margin. After all, our industrial economy consists of workers in various industries trading their output with each other and the more products a given industry has to give for a fixed amount of other products, the greater the physical volume. So, you unwittingly are adversely affected in total national consumption, and have the price squeeze on profits just a little tighter because of the cotton support plan.

Are You A Processor or Supplier?

Sooner or later, each of you must ask yourself this question: "Am I a raw material producer or a consumer goods supplier?" The country needs both, so the answer for anyone is dependent on individual factors. The raw material producer is characterized by tonnage production, generally low margins and relatively simple sales problems. He looks back to his raw material and to his technical problems of conversion. The consumer goods supplier looks primarily forward to the consumer market, and is interested in producing the most desirable product regardless of raw materials. He is concerned with market analysis, consumers' preferences and distribution methods. He wants to see his product reach the consumer on the most favorable terms.

In our form of economic society, the greater rewards go to those whose products gain the greatest acceptance by the

consumer and the value placed upon a product by the consumer determines the profit margin. Contrary wise, money as such commands relatively small return—either in Government bonds or in the operation of machines producing a staple, when such machines can be freely acquired by anyone wishing to do so.

Perhaps one of the primary problems is that of stability of price. I think it is axiomatic that if a manufacturer is to have reasonable price stability for his product, he must have the flexibility to develop individual characteristics in his product in line with what the consumer wants. The greater the degree that such individual characteristics can be controlled, and not widely duplicated, the more independent a manufacturer can be in his selling structure.

You have probably the most difficult conditions under which to make developments in this direction, and yet the degree to which your product is merely a staple raw material, entering the many avenues of conversion into other products, the more you are at the mercy of a supply and demand situation created by others. This situation is accentuated by the flexibility of your equipment, whereby you can shift from one construction to another to meet momentary demands. Thus there is little opportunity to aim at a specific consumer market and to study the product that best satisfies that particular market.

Can You Get More of the Consumer Dollar?

How about this industry securing a larger share of the consumer dollar? Frankly, I doubt it. The rising standard of living has expressed itself primarily in consumer durable goods—modern homes, mechanical household appliances, the automobile, travel, education etc. Some of these things involve textiles, but not in proportion.

As a matter of fact, relative to income, expenditures for clothing and household textiles are now at about the lowest point in the 25 years for which data are available. 1929 saw 10.1 per cent being used for this purpose. By 1940 it was 9.1 per cent. In 1950 it had reached 8.5 per cent and last year was 7.4 per cent. This has been an era of expanding incomes. For most people, what might be termed discretionary income has been increasing. Even after allowing for rising costs of food and shelter, people have had more money and a higher share of their incomes left for spending on other things, but as these figures show, they have not elected to spend it for textiles.

The fact that people have been spending a smaller proportion of their incomes for textiles however does not mean they have been buying less clothing and household textile items. The evidence in fact suggests they have bought more, but at lower prices. In 1947 and 1948, an average of 43.6 linear yards of finished cotton, synthetic and silk broadwoven goods were produced for apparel and household use, for each man, woman and child. The average for 1952 and 1953 was 44.2 yards. The National Cotton Council counted the total number of items of wearing apparel produced each year, from handkerchiefs and diapers to custom-made suits. Comparing the average of 1952 and 1953 with the average of 1947 and 1948, population increased by nine per cent, but the production of wearing apparel in suits increased by 16 per cent. For children and infants' wear, the rise was 42 per cent.

The American consumer has been able to get more value out of his textile dollar because of two important developments: the competition between cotton and man-made fibers

and the change in consumer preference as to type of clothing and fabric. Over the post-war period we have seen a shift in apparel tastes toward the informal, less expensive, better designed, more practical and more durable, in terms of end-use, with increasing use of synthetic fibers or blends. The automobile has done more than create income for the nation and absorb consumer buying power. It has helped to develop a demand for lighter weight clothing. It has helped promote the move of the population to the suburbs, which in turn has resulted in popularization of informal wearing apparel. This has reduced the average wardrobe cost to a greater extent than indicated by retail clothing price indexes. We seem to have gone about as far in the direction of casual clothing style as can be expected, however; this means that the negative pressure exerted by this trend on clothing expenditures is likely to diminish. Moreover, popular preferences for casual wear present other opportunities for the textile industry to increase its share of the consumer dollar.

The textile needs of our economy are of course larger than is represented by the consumption of clothing and household textiles. Industry consumes a substantial portion, some of which goes into such consumer goods as shoes and automobiles. The needs of our armed forces may be considerable as in 1951 and 1952. There is also a foreign market for part of our textile output. Looking at the domestic civilian consumption, which represents the solid core of the market for textiles, we find that in the last five years consumption of all fibers averaged 36.1 pounds per person compared to 29.8 pounds in the five years preceding World War II, 1936-40. Cotton represented two-thirds of this total compared to 80 per cent in the pre-war period. There are periodic swings or cycles in fiber consumption; 1954, for example was considerably lower than 1950. Yet if 1954 represented a trough in its cycle, it was nevertheless higher than previous trough years. With a continuation of income at or near present levels, it is a reasonable assumption that fiber consumption

per capita in 1955 and in the years immediately ahead, should rise from the 1954 level.

Population has been growing at the rate of about 1.7 per cent annually. Since 1950, 11 million people have been added. It is established that by 1960 we will have a population of about 176 million. At 1954's fiber consumption rate of 32.6 pounds per capita, the growth in our population will mean an increase in demand of about 450 million pounds or about eight per cent of fibers per year for consumer and industrial uses. Translate this into pounds and yards of your specific products, and you can see what there is ahead if you go out aggressively for it. And these figures may be too conservative because per capita consumption may increase rather than remain static. Even if the rate were to increase only to the 1950-1954 average rate of 36.1 pounds per capita, the additional poundage of consumption compared to 1954 would amount to over a billion pounds, or 20 per cent.

The population changes in the next decade or so are fraught with even greater meaning to the textile industry than the mere fact of growth would indicate. It costs more to clothe a boy or girl in the 15 to 20 age group than one 10 to 15. The latter requires a greater outlay than one in the 5 to 10 category. The infant and young child are lowest on this scale. In 1950, there were 24.4 million children between the ages of 5 and 15. Their numbers have been growing much faster than the general population and this year there will be 30.4 million, an increase of six million or 25 per cent. As these six million move into higher age groups in 1960 and 1965, their rising per capita clothing needs should have an appreciable effect on the clothing expenditures for the entire population.

The prospect of improved demand for textiles contrasts with the outlook for cotton spinning capacity. In the past the intense competition in this industry, together with its capacity to produce in excess of normal demand has resulted



Members attending the final session of the sixth annual meeting of the American Cotton Manufacturers Institute, after hearing an address by Senator James O. Eastland of Mississippi, advanced Arthur K. Winget of American & Efrid Mills to the A.C.M.I. presidency. Seated above (left to right) are: Ellison S. McKissick, past president; Robert C. Jackson, executive vice-president; F. E. Grier of Abney Mills, first vice-president; Senator Eastland and Mr. Winget; L. G. Hardman Jr. of Harmony Grove Mills, newly-elected second vice-president; J. Craig Smith of Avondale Mills, retiring president; and F. Sadler Love, secretary-treasurer.

Standing are current directors and executive committeemen, as well as past presidents of A.C.M.I. and its predecessor organization, the American Cotton Manufacturers Association: H. D. Ruhm of Bates Mfg. Co.; Frank C. Williams of Roanoke Mills Co.; Harold W. Whitcomb of Fieldcrest Mills Inc.; R. G. Emery of J. P. Stevens & Co. Inc.; Julian Robertson of Erlanger Mills Inc.; Walter S. Montgomery of Spartan Mills; C. B. Hayes of Pacific Mills; H. K. Hallett of Kendall Mills; James A. Chapman of Inman Mills; George E. Glenn Jr. of Exposition Cotton Mills; Charles A. Cannon of Cannon Mills Co.; Earle R. Stall of Cone Mills Corp.; R. A. Spangh Jr. of Washington Mills Co.; Charles C. Hertwig of Bibb Mfg. Co.; R. Dave Hall of Stowe Thread Co.; M. M. Bryan Jr. of Jefferson Mills; H. S. Newcomb of Berkshire Fine Spinning Associates Inc.; D. H. Morris III of Geneva Cotton Mills; G. O. Lienhard of Chicopee Mfg. Co.; Charles Caffrey of the A.C.M.I. staff; and Brackett Parsons of Pepperell Mfg. Co.

in over-production and a whittling down of profit margins. While population and therefore demand, has been rising, this excess capacity has been pared down. Since the end of 1949, population has increased by 8.3 per cent but the number of cotton system spindles, consuming cotton and including those idle, has declined from 22.1 million to 21.1 million or 4.7 per cent. The actual decline in capacity is relatively less, of course, since a larger percentage of the spindles now in place are of the modern, more highly productive type, but it is a fair conclusion that the problem of excess capacity is becoming less serious.

Projection of cotton consumption and average cotton spindle consumption rates for the rest of the decade indicate that utilization of existing capacity will be stretched beyond what was experienced in 1950, 1951 and 1953, previous peak years of activity in relation to available capacity. Sufficient expansion in the number of spindles and replacement of scrapped over-annuated equipment, including six million spindles at least 40 years old, would require a larger annual investment than has been made in the post-war years to date. These observations do not take into consideration the abnormal pressures which would result in the event of a new national emergency.

The industrial revolution was ushered in many years ago by applying power to the textile loom. Here we are in 1955 still wrestling with the problems created by constant technological improvement. It does look however that for the first time in many years, a proper balance is in sight between productive capacity and normal peacetime needs of the country. The junking of obsolescent equipment and the growth of population will soon be apparent in greater stability in markets and production.

A. C. M. I. Convention . . . quote, unquote

J. CRAIG SMITH, *retiring president of the American Cotton Manufacturers Institute*: A progressive industry must be a healthy industry. Modernization of equipment, improvements in technology, the expansion of research, programs of experimentation and promotion—all require money. An industry so basic to the well-being of the country as ours, and possessing as it does so stable a consumption volume, should never lack funds to finance all the elements of progress. If the industry is to advance and prosper, we must find a way to overcome these recurring periods of financial distress. We must re-examine the degree of blame which belongs to management. We must study our procedures of marketing and merchandising. We must call more heavily on the possibilities of new and improved fabrics. We must understand better the wants and the responses of the consumer.

DR. O. GLENN SAXON, *professor of economics, Yale University*: Reduced tariffs are not a panacea to helping foreign nations achieve an improved economic status. An exaggerated importance has been attached to lower tariffs for foreign nations; even if the United States eliminated all tariffs, it would still leave foreign countries with many unsolved problems. . . . To improve conditions abroad there should be (1) greater convertibility of currency between nations; (2) return of foreign nations to their pre-war markets, and (3) return to a gold standard by the United States.

A Look at Integration

When I first became acquainted with the textile industry, I was amazed to see the vast investment in productive materials and equipment, and the responsibility for employment of thousands of people so far as the mills were concerned, all very much at the mercy of a distant sales office, which had no great investment and no particular employee responsibility. Integration began to be talked about as an answer to this situation and certainly the years since the war have brought great changes in the alignment of various producing and sales organizations. But one can achieve a financial merger or financial control of several formerly separated businesses and yet not have a true merging of identities. Our buyers think that, to a very great degree, even though there may be common financial ownership, there is not the close collaboration and intermeshing of activities between production and sales people such as exist in most other industries.

I have always held that sales effort starts with the influence of the sales organization on the product itself, long before it reaches the point of its manufacture. The sales people should be able to know, not only what people are buying at the moment, but what qualities they would like to have that are not now available and what they would be willing to pay for such qualities. By quality I mean any merchandise characteristic which is identifiable by the customer.

The production people know limits, both from the standpoint of output and the adaptability of equipment involved in such matters, and collaboration brings forth the practical compromise. Long association between producer, fabricator and distributor can be a great asset.

The industry has a high selling cost, and it could get more value for these expenditures if selling forces could be used to perform more than the direct role of salesmen. Let me quote two illustrations of this point:

"We had a sales representative of a very large mill tell us it was 'impossible' to make a certain weight synthetic-blend fabric washable. Within a few weeks we had it in production in another mill, where sales and production are more closely integrated. We now use about one million yards per year of this fabric."

And here is another example: "The sales heads of several large mills told us it was 'impossible' to blend certain synthetic and natural fibers to make a fabric we felt our customers would want in work clothing. The owner-sales manager of a small but modern mill found the way to make this blend in less than six months, and we now buy several million yards per year from him."

The re-alignment of interest which has taken place since the war has resulted in many very large organizations under one control and management. Perhaps a few leaves from Sears' book of experience would be helpful in the question of an organizational set-up for a big and complicated business. In the first place, we recognize the fact that the soundest and most intelligent decisions are most likely made at the level at which all known facts which bear on a particular subject come together. The level where this is true differs widely, depending upon the nature of the problem. But somewhere there is a point where all the facts which have to do with the particular matter are known. It is at this level that the most thorough discussions take place and the problems and "kinks" are hammered out. Problems lose much of their force and vitality when passed on from one

level to another higher level for decision, where all that is added is a somewhat greater prestige of office.

Our people think their counterparts in your organizations do not have nearly the freedom of decision at a given level which we have in our organization. Now, in order to have confidence in the soundness of decisions made in conformity with this principle, one has to be sure that the selection of executives at these levels was good to start with, that there has been adequate training, that they understand policies and objectives, and that the general points of view of top management are thoroughly understood down the line so that people can act with confidence that their general leanings are the same as would exist at higher levels.

Then, we put great importance on competent staff work. We expect the staff to consist of highly-qualified specialists, each one knowing more about a narrow speciality than would anyone in the line of command, so far as that speciality is concerned. We do not expect staff people to feed ideas to top management and then have them come down the line as orders. This is bureaucracy at its worst. Neither do we want staff specialists unable to influence the conduct of the business, each in his own way. We, therefore, say to a staff man that he is responsible for getting improvements in operations effected because his superior knowledge of the given subject, but he must do so by getting voluntary acceptance of his ideas at various levels in the line organization. In effect, he has responsibility without authority. It is a very workable plan, and the staff man who is unable to interest anybody in the value of his ideas is lacking something and is not making good. By the same token, a given executive in direct line of authority who rejects the efforts of many staff specialists soon shows himself as not the right person for that job. When you add to this the ideal of a common objective, you secure an atmosphere where there is an eagerness to achieve improvement through the wealth of talent made available.

All this may have no bearing in your particular affairs but I thought I would make these comments because it does seem to the outsider that, in putting together under one head many formerly separated units, you do not necessarily create a closely interwoven organization.

I am a great believer in the proposition that a country needs great corporations and that the full benefits of our competitive society are achieved through the competition of great, efficient operators instead of through thousands of inefficient ones. The public gets the best values in food-stuffs through the competition of the big fellows. Generally I believe a degree of balanced vertical integration leads to the greatest efficiency, but it must be balanced, and it must be truly integrated—not merely financially controlled.

Product Development and Research

This brings one quite naturally to the question of product development, or, as some say, applied research. One cannot help but be a believer in research if he will review its contributions to the expansion of our economy over the past years. I am not qualified to pass judgment on the criticism so often leveled at the textile industry for not supporting research activities to the degree that they are supported by other basic industries. So much depends upon the money that the various industries have available for investment in research, and much depends upon how you define research. First there is the field of what I would call advanced research, where problems are dealt with and answers are

A. C. M. I. Convention . . . quote, unquote

DR. M. K. HORNE, *chief economist, National Cotton Council of America*: The whole world of fibers and textiles today is a great deal more progressive than it would have been without the impact which it has felt from the man-made fibers. (Except for them, this market research program for cotton might not exist today.) We can thank them for much of the attention that is now being given to research and promotion throughout the whole fiber world, particularly the cotton world. All in all, the heightened competition among fibers has been a good thing for the consumer, a good thing for the country, a good thing for the textile industry, and I might even say, a good thing for cotton. The raw cotton industry has made more progress in the past 15 years than in the previous 100, and has lifted its sights toward new horizons of future progress. . . . You can draw almost any conclusion that you please about the outlook for cotton, provided you pick the right uses to prove your point. But our task is to work on the whole thing. There have been some spectacular losses and some spectacular gains, but the whole picture is not spectacular in either respect. It is very sobering to anyone who discounts cotton's dangers. It is deeply reassuring to anyone who fears that cotton may be on the way out. Most of all, it is challenging. It challenges cotton to push forward as the awakened and progressive fiber that it has been in recent years, emphasizing promotion, improved quality, and more efficient production.

J. W. NEWMAN, *president, Dun & Bradstreet Inc.*: Progress that has been made in the textile industry shows that it has given top consideration to the importance of good management. Studies by our company of business failures indicate that success and failure are influenced by management capacity more than any other single condition. The future seems to indicate even more emphasis will be placed on this factor as competition continues to increase.

sought which lie beyond the fringe of what is known; in some cases beyond the limits of known science. When new knowledge is found, an effort is made to find out whether or not it has any practical application. This is the kind of research which has produced entirely new industries like plastics, synthetic rubber, atomic power, and, in the case of textiles, the synthetic fibers. Du Pont or General Electric not only have the size and resources to support this kind of work, but the growth of their business so depends on it that it becomes an essential effort to them. However, there is great risk in this kind of research, and, if proper precautions aren't taken, it can waste a lot of money.

It seems to me that in your business, as in ours at Sears, we must take what is known and apply it to better satisfy the desires in the minds of consumers. Probably the most difficult part of this job is to perceive what these desires are—what the consumer considers the most important, least important, and what he most wants to have. For example, at one time someone must have observed that people certainly didn't want to iron bed sheets and didn't want to make beds with flat sheets. As a result, the fitted sheet was developed to avoid these inconveniences. This item is today for

A. C. M. I. Convention . . . quote, unquote

ROBERT C. JACKSON, *executive vice-president, American Cotton Manufacturers Institute*: The whole future course of the U. S. cotton textile manufacturing industry will be shaped, for better or worse, by the outcome of current tariff considerations. We have been proud of A.C.M.I.'s performance. I say this not necessarily as related to the actions of individual staff members, proud of them though we may be. But, rather, we can take justifiable pride that after these several years of building effort, it is now possible to see the extent to which this organization *can* serve as a framework for industry thinking and action when the need arises. . . . We *do* know this—that as a result of all the efforts by the textile industry—public understanding of the problem has been vastly increased. The interest and understanding of Congress have been increased. The editorial position of several great newspapers has changed. The results are far-reaching and cannot be measured. It has all meant the tapping and putting to good use of new resources of strength. This is bound to mean a great deal for a long time to come.

HON. JAMES O. EASTLAND, *United States Senator from Mississippi*: Not too many years ago, you were a one-fiber industry—you consumed only cotton. But science and progress brought forth synthetic fiber, adapted to spinning and weaving in the cotton system. Accordingly, for the first time you as cotton manufacturers had a choice of fiber, and, also for the first time, the cotton farmer's first point of competition became your mill door. Stated differently, the raw cotton industry has found itself faced with an entirely new and different sort of problem—one of keeping the cotton mills spinning cotton. Because of the newness of this problem, it has been slow to sink in. But it is beginning to sink now, and the raw cotton man has no choice except to face up to the facts of the situation. . . . In the long run, farmers can produce only so much as is consumed in this country or sold abroad. Any farm program that is based solely on price with complete disregard of its attendant effect on consumption is doomed at the outset. Just as you must, farmers must meet squarely their competition on three fronts: price, quality and sales promotion. They cannot stand on any one or two of these factors any more than they can stand on a one or two-legged stool. Eventually they are bound to go down unless they compete on all three fronts. . . . But if any program to increase markets for U. S. cotton is to succeed, farmers must have the opportunity to meet their competition on all fronts—both domestic, as well as foreign—and that includes price competition. Costs of producing cotton can and must be reduced. A greatly expanded research program will help. We know unit costs can be reduced with a greater volume. But farmers must by their own vote have an opportunity to choose between 90 per cent of parity with a greatly restricted acreage which will produce what we can sell—both at home and abroad—or a much larger acreage at a lower support price—a price at which the amount of cotton produced will sell competitively both at home and abroad.

many of us who make or sell sheets, the principal, if not the only profit maker in the whole business. We should note that the fitted sheet was no change in fabrication: it required no change in spinning, weaving, or finishing.

Whoever first applied the tufting process to floor covering did this same thing—combining common construction in yarns and backing fabric to a new purpose, and gained for the cotton industry a part of this large market. This was not the development of better yarn or better fabric—it was a new use for both.

More often the opening up of new markets requires some development of the materials involved. Back before the war I daresay very few men had any significant investment in Summer-weight suits. Those they had were of light worsted or a very narrow group of cotton constructions. Then came light colored cotton cords, cotton and synthetics, Dacron and wool, dark colored cords, and so on and on. Today most men own several Summer suits and have therefore allocated part of their income which previously went for some other purpose to a new textile product.

It becomes evident that in the textile field product development can take place at several different points in the production process—in the blending of the fibers used in the construction of the yarn or fabric, in finishing, or in further steps in fabrication. However, the starting point must be a basic understanding of the consumer desires.

The successful cases mentioned so far have been of obvious major importance in this industry, but we feel that a constant stream of smaller developments though less important would be a more reliable stimulant to our business. The shrink-resistant treatment which is applied to our 4-Star all-wool blanket is the primary justification for the successful promotion we give it. We've had similar success with washable wool sport shirts and with Dan River's X-2 process on cotton sport shirts, but there aren't enough of these cases.

In connection with research, it is encouraging to note that even though the total expenditure is low, the speed of its growth in this industry is remarkable. The number of people engaged in textile research has doubled more than twice since 1946. The Institute of Textile Technology has been established, privately-operated laboratories have been formed and expanded, and schools have been well-supported. All this is not only commendable but surprising in view of the low profit years that this industry has been through and other pressing demands for the replacement of old equipment.

Of course, it must be recognized that this search for improvements may lead to severe and expensive adjustments in equipment or otherwise. It is almost certain we won't find it possible to stay in a straight cotton production. In 1952 our tufted floor covering was 72 per cent cotton. Today it is only 35 per cent cotton. But the mill involved has made the shift, and in other industries where these same conditions have been faced, even more severe shifts have been made. The new Dacron and cotton blends which we and others are putting into our shirts seem to us to have such obvious points of superiority over previous all-synthetic or all-cotton fabrics, that it is conceivable they will considerably reduce all-cotton shirting production sometime in the future, and it would be folly to ignore such trends. In fact, from some points of view it is to your advantage, because as special finishes and fiber blends and constructions are introduced for the reason of the new properties that

they bring to the product, they succeed in minimizing the handicap caused by the artificial value that is built into your cotton product because of the federal price support policy.

For those of you who want to think in terms of the consumer market, here is an idea from one of our durable goods manufacturers. He divides his products into profit classes, A, B, C, and D. Items that become ordinary, that his competitors learn to make well, in which he has no exclusive advantages, in design or process—will drift into class D in profit. If no A class items are created, all will become B, C, and D, and then C and D, and finally all D. He centers his attention on the constant creation of class A items and on the fine points of manufacturing efficiency for the other classes.

Another suggestion for what it is worth along this line. If I may draw on my Sears' experience as well as my limited observations in your industry, I would suggest that individuals be made responsible for product lines rather than functions. Make them responsible for the development of new items, the line to be offered, the prices, the scheduling of quantities to be produced, the sales and the profit all of a particular product, as distinguished from a purely functionally responsibility such as sales, product development, or operations over many lines.

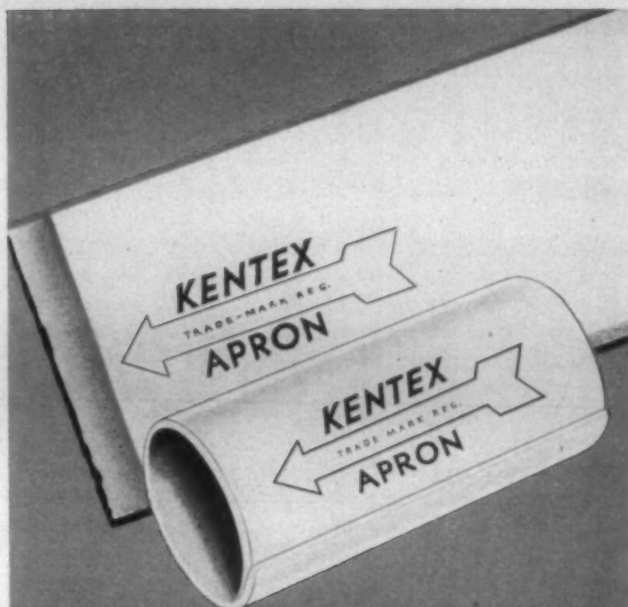
Finally, it seems that a successful product development activity must be formally organized. There is an official list of projects, the major part of the work is confined to those projects, and there are specific people and facilities divorced from routine duties whose job it is to work on these projects and bring them to fruition.

Import Opinion from A Merchandiser

I ought to have enough sense not to interject myself into the import situation. I realize that the channels of trade between the nations of the Free World must be opened. At the same time I'm sure that no appreciable imports sufficient to cause economic harm here will be permitted. This country has developed a balanced production and consumption to the point where the amount of imports necessary to create a prosperous economy in say Japan, simply could not be absorbed. As a nation we must make some gestures in the direction of two-way trade, but the real markets are between other nations of the Free World.

The subject of imports of Japanese merchandise is well to the fore in the minds of many at the present time, and I can understand your concern with the implications of this situation. An economy predicated on a standard of living materially lower than ours, but nevertheless equipped with modern machinery and obtaining high productivity in the use of such equipment, is a threat not to be ignored. Nevertheless, every coin has two sides, and the other side is our own position in export markets. Last year this country imported 73 million square yards of cotton broadwoven goods, but in the same period of time we exported 605 million square yards, much being in the same category as the imports. In addition, we exported sizable amounts of finished cotton products; in 1953, for example, foreign customers took about 20 million dollars worth of men's, women's and children's woven cotton garments and at least 17 million dollars worth of woven cotton household goods, such as blankets, bedspreads, sheets, pillow cases, towels, bath mats, curtains, draperies, etc.

There is a wide body of business opinion which recognizes



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Hugh Williams & Company, Toronto, Canada—Canadian Representative

that certain industries in the U. S. export a very material portion of their production. . . . the automobile industry, for example. Yet each businessman feels he has to appraise his own industry on its own merits. Thus we can see the apparently contradictory viewpoints which lead one to believe that exporting is very important to some industries, and two-way trade is a necessity if we are to continue to have such exports, but yet require a protectionist attitude with respect to the individual's specific industry. Let us look at the automobile industry a little more closely. In the first 11 months of 1954, over 330,000 cars and trucks were exported. The automobile industry is the largest user of cotton textiles as it is of many other commodities. While the precise breakdown by various categories is not known, somewhere in the neighborhood of 1.8 million linear yards of goods, which you little think of as being produced for export markets, actually were exported.

Restrictions breed retaliation. It would appear that your industry is far more dependent on export markets than is popularly assumed. Your concern with imports is understandable but it would appear important to keep both the plus and minus sides of the question in view. Then I think there is another point of view which should not be dismissed abruptly. I think the day is coming when leaders of Ameri-

can industry in many of its segments must adopt a more international point of view and take advantage of possibilities in a foreign country, if the advantages are as striking as some people believe. Sears has adopted this point of view in its Latin American development, and I, for one, believe that the only way American leadership can find full expression is for industry to be a part of it. It should not all be left to the government because, in many ways, government is not able to do many things which industry can do toward getting a free but modern economy functioning in other countries.

In conclusion, for those who will continue to function as mass producers of a staple raw material product for other fabricators, I see a better outlook than has been obtained for many years. For those looking to the consumer market, I see: (1) a change in attitude as regards textile technology, research and scientific management; (2) a change in attitude as regards market research and marketing emphasis; and (3) a trend towards fiber integration—the all-purpose mill.

They will be active in the field of synthetic blending and not leave this to the producers of the synthetic fiber. They will be active in the upgrading in styling; in fashion appeal; the development of practical finishes for specialized uses, and not leave this to the cotton finishing industry.

PSYCHOLOGY IN SAFETY

By DR. D. J. MOFFIE, Head of Psychology Department, North Carolina State College



In any manufacturing plant certain employees have an affinity for accidents. How to recognize them is the subject of Dannie Moffie, who on April 2 addressed the Eastern Carolina Division of the Southern Textile Association.

IN developing the theme of psychology and safety, the first topic I shall take up is the incidence and importance of accidents. We feel in the field of accidents that some people have a susceptibility because of some inadequacy somewhere along the line. Obviously, in industry we have to find out who has that susceptibility and how it can be corrected. Can such a person be put into a job where accidents will be at the minimum, and can we thus avoid accidents? Our research work so far indicates that this can be done.

Most of our work has been in the field of transportation. I wish we could give you some figures in the textile industry, but at this time we cannot. Our work in the field of transportation has been very revealing. It has been so successful in one type of transportation that it is proposed to apply it to others.

Five years ago one company was operating its trucks approximately 45,000 miles per accident. The national figure is a little higher, incidentally. Today that same company is operating at a figure of nearly 400,000 miles per accident. Let me assure you, however, that it was not

the screening program entirely that did the job. The company also instituted a training program and also an effective supervision program, both in the plant and out on the road. All had their effect, but without hesitation the company officials will tell you that the selection program had the larger part. About a year ago, because of the need for drivers, the selection program was reduced, the screening program was reduced; and almost anyone that applied for a job as driver was employed. Almost at once the company's accident rate went up, and the company officials became alarmed. As a result the screening program and rating program were put back into full effect, and the accident rate went down.

In the highway transportation program for safety it has been found that drivers who have good visual perception and good depth perception have fewer accidents than people who do not have these visual characteristics. Obviously, you have to see to drive. It is true that human beings can learn to compensate for visual defects, so the question becomes one of how much good vision must a driver have in order to become a safe driver. It has also been shown from our research that almost 75 per cent of persons who have been referred to eye doctors can improve their vision.

The figures in industry also show similar indications. At Purdue University, through Dr. Tiffen and his colleagues, considerable work has taken place over the last five or six years to uncover the relation between good vision or adaptable vision and safety. They have arrived at much the

ame figures. Those employees with good vision or vision adaptable to the job have a lesser number of accidents per certain number of hours of working time than do employees with poor vision.

What does this mean to you? It means that if we are to think about a safety program we must first of all think about the employee in terms of his accident susceptibility, if he has such a susceptibility, either at the time of hiring him, to keep him from becoming an employee of the plant, or, if we hire him, to place him in a department in which he will be relatively free of accident situations. And that, of course, can be done. It means that your company and your employment officer or personnel department will need to develop screening devices, screening tests, psychological tests. For instance, does a man have a history of accidents in his previous jobs? That information can be obtained either on your application blank or through your reference, and so forth.

We are uncovering other aspects of accident susceptibility. For instance, what is the home environment? What is the personality development? The insurance companies have become very much interested in this problem because, of course, these studies help them in determining what sort of persons are good risks. We hope that as our research goes on here at State College we shall be able to supply some answers, not only for insurance companies but for your industry, and I am sure that we shall be able to do that.

What else can we say about this matter of accidents? We know that age and experience are very important factors, and we also know that these vary for the industries under consideration. Just a few weeks ago I was looking over the records of a large textile mill near Raleigh. It was found from the record of all their accidents that the peak was coming somewhere between the first and the second year of employment. How many of you have actually studied facts? I am convinced from my study not only of your industry but of other industries that you are not doing that. Not long ago a large utility company in the Southeast became interested in this problem. We wanted to know what their experience had been. The company had good records, but at no time had it attempted to put those records together. What is the effect of education upon accidents? There was no answer to that. When are the accidents occurring? What is the history by departments? The facts were there, but no one had tried to analyze them. In this company we found that the largest number of accidents was in the first, second and third years. Then they slowed down.

In transportation the fact that was of most concern to the large trucking firm with which we were working was that the largest number of accidents was in the third, fourth and fifth months of employment. After that the curve decelerated rapidly. What is the answer? I wish we could tell you the answer. It is probably partly training, partly adaptability to the job, and partly experience.

It is plain that accidents occur early in the employment. From the transportation point of view it means that industry must become cognizant of facts early in the program and improve its training, and management must become more active at the time the man is employed. Research can provide a plan, but management must carry it out.

What else can we say about accidents? Psychologically we can enumerate a number of factors. We found that the

high frequency of accidents was occurring during periods of low emotional ebb on the part of employees. Psychologically, all of us have our ups and downs. That is, we do not go through life on an even plane. Some few people do, but we would not be very interesting if we were exactly the same today as we were last week or last month or last year. It was shown that approximately 20 per cent of the accidents were occurring when employees were at a low ebb emotionally; that is, when they were depressed and felt insecure. What does that mean? It means that those people can be screened out at the time of employment, because they do represent a certain segment of our population. They can be discovered through application blanks or through screening tests used at the time of employment; or they can be employed and supervised more effectively in day-to-day relationship.

I am sure the supervisor has been neglected in our modern industry. To the worker the supervisor is the first line of management. There is still that social distance between the worker and management that at that level begins to show itself between the employee and the supervisor. If we are to gain this eminence in industrial development in the Southeast I think we have to have more effective supervision, because there is the keynote to good employer-employee relations. So the supervisor must be aware of why people behave as they do. He must be aware of how these emotional upsets, either on the job itself or in the home, tend to disrupt the worker's performance. He must be aware of the fact that the employee has an emotional problem, whether it be coming from the job or from the home, that can express itself in highway accidents or industrial accidents.

Some of our work is going on now with a group of supervisors in the P. H. Hanes Knitting Co. in Winston-Salem, N. C. I am meeting up there occasionally with a group of supervisors in the morning and with a group in the afternoon, and we are going through what I would call a series of conferences on industrial psychology, and teaching them how to recognize this problem and how to work with these people. Experience all over the country indicates that we can train foremen and supervisors to do this job more effectively. It means, then, that the supervisor must be aware of the human element, that he must understand the human being just as he understands the machine, that he must be aware of what is causing difficulty in the employee and take remedial steps to correct it. And it can be done.

What do some of our other studies indicate? A study in industrial relations at the University of Chicago to determine whether an employee-centered supervisor tends to produce fewer accidents than a supervisor who is more autocratic, more production-centered, showed that the supervisor who is employee-centered—that is, who knows his employees, knows their problems, and understands them, has fewer accidents than the supervisor who is more production-minded.

I believe that research indicates that we need to go more and more to the human element in the terms of its attitudes. That is, of course, a big problem. What are attitudes, how can we develop attitudes, and so forth? An attitude is how we feel toward certain issues, regardless of what the issue may be. In other words, attitude is an emotional state; it is how we work out our day-to-day relationships. The important part is that attitudes are not developed overnight and will not change overnight. They began

in childhood, from the way we were treated at home, the way we were received in school, and how we reacted toward certain issues. All of those put together determine the pattern of attitudes we shall have in society and particularly in this instance of safety. So we are convinced that a real safety program is not one of just screening, not one of just training, nor one of supervision alone, but one in which all the people in an industrial organization are brought together in promoting a safety program. I am pretty much convinced that industry cannot become safety-conscious by appointing a safety director or a personnel director. Management has a real responsibility here. Management must also take the initiative in promoting safety, making safety a real issue. Bringing the entire operation into a safety-conscious sphere, so that this attitude may come about and will come about, is part of the program. Nor can safety be relegated to the safety director without bringing the employees and the supervisor into play.

A pet idea of mine recently has been how can we overcome resistance to change in many of our operations. You know that if you are putting in a new high-speed machine and have a worker there who has been on the job for 25 years you are going to run into resistance. Resistance to change, we are sure, arises instantly because of the psychological issue of insecurity. How can we overcome resistance to change? We do it by getting the co-operation of employees, getting suggestions from them as to how employees can be shifted into new jobs.

It is my feeling that management in the South has a real opportunity. I hope you will not let that opportunity slip by because I am convinced that if we can move rapidly in these industrial-relationships problems and do effectively the things that need to be done we can outstrip management that is on the defensive. I am also convinced that safety is a real problem. It is an economic problem and is a social problem. Each time a worker is injured or killed that whole department is disrupted. There is no real way

in which we can determine the effects on the morale and in other ways on the other workers. So it is a real problem. Why we have not put more effort on it I do not know. I am sure that in the years to come more effort will be placed on it.

We can provide you with some real issues here. You need to make your selection program a more effective program. Some of you, I am sure, have good selection programs; others have not made so much effort. In other words, we need to keep the rotten apple from coming into our plant. We must have selection from the standpoint of personality (that is, personality factors that seem to be related to accidents), selection from the standpoint of the previous experience of the man, selection from the standpoint of environmental and home factors that are related to accidents, selection from the standpoint of basic physical and mental characteristics. Vision is one. I dare not ask you how many of you have a visual training program in your plant. The equipment does not cost much. You can train someone to conduct these examinations at the time of employment and periodically from there on. That does not cost too much, nor does it take too much effort. You can also increase the effectiveness of your training program. After all, we train our students here at college to do a job. We do not permit persons to go into a classroom from the elementary-school level or from the high-school level. Those persons have been trained to teach. But we do take untrained persons into our plants and try to give training. After all, if the instructor has not been trained to do the job he is thinking about himself and not the employee.

Supervision can be improved. Management can take interest and initiative in this problem. Just as you are concerned with many other problems in your organization, management can take the initiative in this matter. Accidents can be prevented; safety is a real issue for you; and you can take a positive plan of action if you so desire.

Improved Safety—Through Organization

By RUDELL REED JR., Professional Engineer and Assistant Professor
Department of Industrial Engineering, North Carolina State College

Once you've convinced yourself of the desirability of a formal safety program, there is the not-inconsiderable item of organization. In this article an industrial engineer tells you how to go about it.

THE first and most important step in any safety program must be the acceptance by the management of the responsibility to furnish safe conditions throughout the plant for personnel. Without management's active support any safety program or organization is doomed to failure.

The initial step toward a safety program may originate within any level of the organization, particularly personnel, a foremen's organization, or a labor union. However, these cannot carry through the program or even establish an efficient organization for the program without first convincing

top management of the needs and benefits, and then obtaining the management's wholehearted support. When this support has been received verbally, it is still necessary that some person at the executive level be assigned the responsibility for the program. This assignment cannot be made as a step-child, but as one of the major areas of the executive's activity. Otherwise any program developed may die of inactivity, lack of control, or loss of objective. It is basic that management give wholehearted support to the safety function.

The program in turn will give returns to management to compensate for the time, effort, and expense incurred in its operation. Many of these returns must be of a nature difficult to evaluate. However, a reduction in the overhead of the firm results from a reduction in accidents. It is easy to find the medical and compensation payments incurred by an injury. Other expenses such as time lost by foremen and fellow

workers and reduction in the productive capacity of the injured worker after his return to the job are most difficult expenses to find since they are hidden in labor and overhead, assigned to production in normal accounting systems. These hidden or indirect safety costs have been studied by various individuals and groups. The consensus of this research shows, conservatively, that this indirect cost is four times as great as the direct costs of medical expense and compensation. The total cost of an injury in 1950 was estimated as \$1,800. With the increased cost of all factors, there is no reason to think this cost has lessened, but rather that present cost is substantially higher.

In addition to these cost benefits from accident reduction there are the additional benefits from such factors as better working conditions, less labor dissatisfaction, reduced labor turnover, and pride of achievement by the entire organization.

Setting It Up

How, then, do we set up an organization and program to obtain these benefits?

After the assignment of responsibility for safety to one of the executive functions, the next thing is to establish an organization for developing, effecting and maintaining the safety organization. There are three basic methods for developing this organization. First, it may be incorporated in the operating line organization with full responsibility for its operation resting on the executive placed in charge and he in turn delegating supervisory and operating procedure through the line with safety being a part of each person's normal duties. This may work fine, but too often safety is not pushed and becomes delegated to a minor consideration; interest lags and the program becomes ineffective.

To maintain interest and increase activity of individuals, the strictly line organization may be altered by the inclusion of committees at one or more levels of the organization. These committees become the central body for their area or organizational level, and to the member safety is emphasized as a major part of his job. The committee allows more active participation in the program for a larger number of persons. It also allows discussion to take place in and among the committees, lending emphasis to the problems and generally providing a better considered and sounder solution to the problem.

The basic committee in this system will probably be composed of foremen. There are several advantages in making the foremen's committee the key committee. The foreman himself is the key to the effective operation of any program. He is in constant contact with operators and has the responsibility to see that his area is accident-free. In serving on the committee he has an opportunity to investigate and discuss accidents, injuries and unsafe conditions in areas other than his own. As a result, actions may be taken in his area as preventive before the accident, rather than corrective following the accident. In order to obtain participation by the maximum of foremen, the committee should be composed of three to five members for staggered terms, with all foremen being given an opportunity to take part. For example, establish a three-member committee, each member with a six-month term. With staggered terms a new member would be seated every two months, so that there are always two old and one new member composing the committee. Every foreman should have an opportunity to serve before anyone is

given a reappointment. This committee should be responsible for: (1) inspection of all plant areas for housekeeping, machine guarding, lighting, etc.; (2) investigation of all accidents; (3) initiation of corrective action; and (4) direction of the actual operation of the program.

Other standing committees could be composed of workmen, office personnel, lower management, or labor union. If more than one standing committee is organized, then an executive committee composed of the chairmen of the standing committees and the responsible executive should be organized to allow co-ordination of activities and effort.

In larger organizations or hazardous industries where operation of a program requires more time than one of the executives can give, a staff position of safety specialist or director should be established. The safety director would assume responsibility for maintaining the program and its direction. In most cases the director operates through the line organization; however, this system loses many of the benefits derived from the foremen's committee. The strongest organization is one in which a full-time safety director is employed to guide and direct the program; but the foremen's committee retains the majority of its original functions. One way of doing this is to have the safety director sit as permanent chairman of the foremen's safety committee and direct its activities.

After the organization is established, a definite program must be planned and set up. The initial steps should be taken by management without fanfare or the placing of additional responsibility on workers. In this case, foremen are considered a part of management. The first step taken should be to make a thorough safety inspection for factors of a physical nature such as providing proper lighting, replacement of worn electrical cords and fixtures, repainting of areas where cleanliness has not been practiced, provision of safeguards for machines and equipment, provision of handrails and railings on stairs and ramps, check and repair fire extinguishing equipment and, most important of all, have management and supervisors follow safe practices as an example to the workers.

After at least part of these steps have been taken, an effort must be made to enlist the support of all plant personnel. Contests, mass meetings, bulletins and the plant paper or newsletter are good means of carrying the safety message to all personnel. This effort to sell must be complete and the workmen must be in regular contact with posters, slogans, etc., which impress the importance of the program. At this time, special personal protective equipment should be introduced. One reason for waiting for the issuance of this equipment is to give the workmen time to become willing to accept and use the equipment. If there is no effort to impress safety thinking when protective equipment is issued, there is often resistance to use of the equipment due to real or imagined inconvenience or irritation. During a period when the workman is safety-conscious, there is a lessened tendency to resist.

Two things are of great importance during this period. First, the material used to create safety thinking must be kept changing and continually new. This maintains interest and does not allow old posters, bulletins, etc., to become shopworn and lose their effectiveness. During this period it is probably well to change material every week or ten days. Later when the program is in full operation, this period can be extended to one month, but should never be longer.

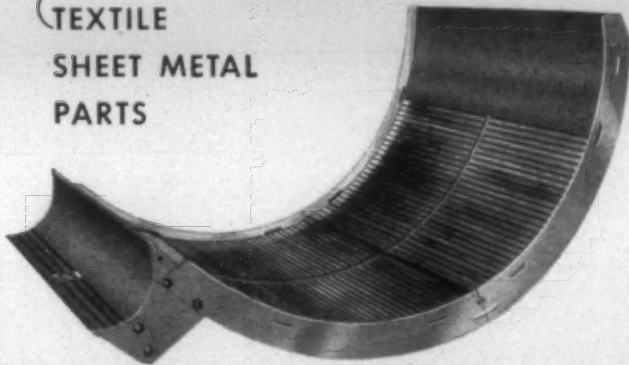
Secondly, during this initial period of the program, all

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suggestions of employees should be acted upon as soon as possible, and if a delay is necessary, an explanation given and commitments fulfilled. Later, after the program has been in operation for some time and rates reduced to a reasonable level, a safety inventory program can be initiated. The safety inventory should not be used prematurely since potential causes uncovered by the inventory should be acted upon immediately, and early in the program this may not be possible.

The effectiveness of any program is reflected by the severity and frequency rates, with no rate other than zero being accepted as goals. These rates are going to be lowered as environmental and behavioristic causes are reduced. The most effective results are those removing potential causes before the accident occurs. These potential causes are discovered by inspection, job safety analysis and safety inventory.

After an accident occurs an immediate investigation should be made to discover the basic causes and corrective action taken at once to prevent reoccurrences. It is necessary to analyze data and retain only that information which has a direct bearing on the accident. This analysis is best made through use of the six A.S.A. cause code factors, namely:

(1) *The Agency*—The object or substance which is most closely associated with the injury and which in general could have been guarded or corrected.

(2) *The Agency Part*—The particular part of the selected agency which is most closely associated with the injury, and which in general could have been guarded or corrected.

(3) *The Accident Type*—The manner of contact of the injured persons with an object or substance; or the exposure, or the movement of the injured person which resulted in the injury. Examples: fall from same level, sprain, strain, trip, etc.

(4) *The Unsafe Mechanical or Physical Condition*—The condition of the selected agency which could have been guarded or corrected.

(5) *The Unsafe Act*—That violation of a commonly-accepted procedure which resulted in the selected accident type.

(6) *The Unsafe Personal Factor*—The mental or bodily characteristic which permitted or occasioned the selected unsafe act.

Properly completed cause code factors formulate the grounds for corrective action. It should be noted here that carelessness is *never* the unsafe act or unsafe personal factor. The cause is the specific act of carelessness and steps should be taken to prevent reoccurrence.

The investigation and analysis of the accident data should be made by the foremen's committee, the safety director or the supervising executive. Steps to correct both the environmental and personal factors should be taken immediately.

If proper efforts are made to remove potential accident causes, and to correct conditions which have caused accidents, the injury rates will be reduced. These reduced rates in turn bring both direct and intangible savings which with the improved confidence of the personnel will fully pay for the cost and effort expended in operating the program and be reflected in lowered unit cost of product.

Headline: "Prices Clipped in Closing Hour of Cotton Mart." Were any customers accorded the same treatment?
—Arkansas Gazette, Little Rock.

Opening, Picking, Carding & Spinning

It May Be Just 25 Inches Wide, But This Frame Turns Out Good Yarn At Springs

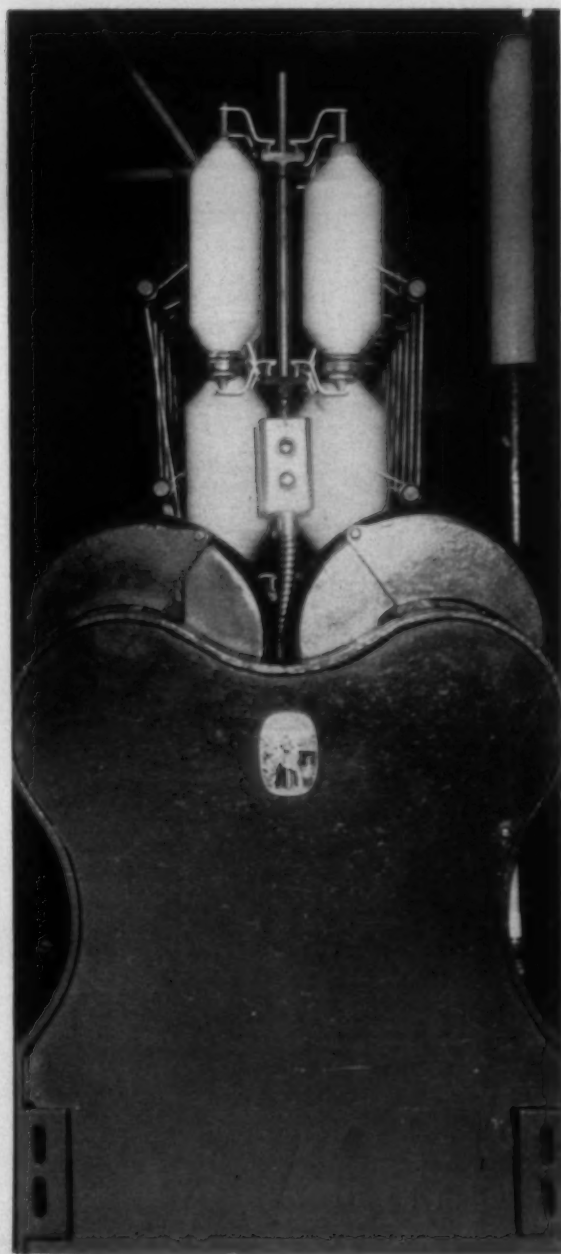
SEVERAL years ago officials of The Springs Cotton Mills moved into a new, ultra-modern "slab-and-slant" main office building at Fort Mill, S. C. The new headquarters was furnished in a decor peculiarly appropriate to the textile industry—desks made to appear like bales of cotton, loom and cloth beams adapted as table supports, shuttles used as arm-rests on chairs, and spinning frames made into davenportes.

"What will he do next?" was the now-hackneyed question then asked about Col. Elliott White Springs, president and general manager who was the idea man behind the building's design and furnishings.

One "next" is a spinning frame just 25 inches wide, which has been running in the Fort Mill Plant since the week before Christmas, three shifts, six days a week. Is it a gadget? Maybe yes, maybe no. It runs; it has a potential in respect to savings in floor space.

It seems that when work was being done on the spinning-frame-being-made-into-a-couch general agreement was reached that the ends of the frame were too bulky and out of proportion for a davenport. "Cut it down" was the answer, and this was done. Then it occurred to someone (reportedly Colonel Springs) that if the ends of a spinning frame could be reduced in width to turn it into the sides of a davenport, why not try it with an actual spinning frame? Thus the mental conception of "Junior," as the Springs-made Springmaid 25-inch spinning frame is referred to around Fort Mill.

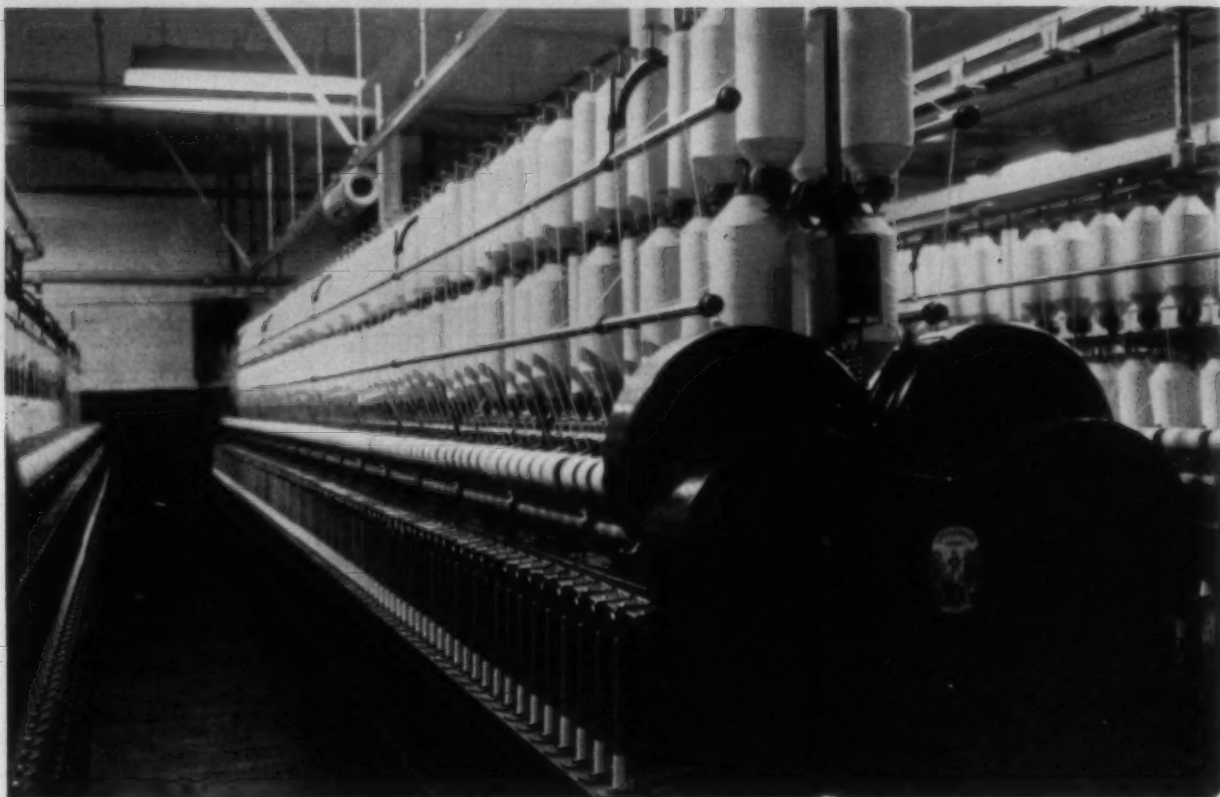
Wheels began to turn. Those put in charge of following through on the idea got hold of an old early-1900s Whitin frame. Most of the original parts were used. The major adaptation was made in the head end, where one of the two larger gears was taken out, and a smaller one substituted. Everything was pulled in toward the center in an effort to reduce over-all width. The result was a width of 25 inches—11 to 14 inches less than the ordinary frame in operation today.



Head-on picture of the head-end of the Springs-made Springmaid spinning frame. Picture is reproduced on approximate scale of one-eighth inch to one inch.

Height of the quills from the floor remains the same, but the squeezing-in process has caused its roving creel to be some $3\frac{1}{2}$ inches higher than on conventional frames. Now under development at Fort Mill is a horizontal creel which will utilize one bobbin per spindle and thus reduce the present over-all height of "Junior." This would take 12x6 roving instead of the present 10x5 on vertical.

"Junior's" spindle speed is 10,871 r.p.m.; front roll speed is 153; gauge is three inches, ring size is $1\frac{3}{8}$ inches. The frame is drafting 36s filling on standard $8\frac{3}{4}$ -inch



Springmaid spinning frame is flanked by two conventional frames of 39-inch width. Height of quills from floor is same, but 14-inch reduction in Springmaid frame's width has caused its roving creel to be some $3\frac{1}{2}$ inches higher than on conventional frames. Under development at Fort Mill is a horizontal creel which will utilize one bobbin per spindle and thus reduce the present over-all height.

quills; the yarns are going into combed sheetings. An American MonoRail under-frame cleaner is mounted on it.

The potential advantage in floor space savings is explained by saying that three "Junior" frames could be put

in the area now used by two conventional frames. For instance, if one ordinary frame takes up one bay, in a hypothetical nine-bay plant, then the plant would take nine conventional frames in its width. The thinking at Springs is that with the smaller frames, installations of one frame would alternate with installations of two frames—1-2-1-2-1-2-1-2-1—allowing the placement of 13 frames in a space ordinarily used for nine. Other advantages cited are comparative ease of cleaning, smaller consumption of spinning tape.

In this example of on-the-spot applied machinery research by a textile firm, no radical changes have been made. Basic assemblies within the workings of the frame are similar to conventional machines; the builder motion has been modified slightly.

The major shops have been alerted to "Junior." They have been asked, according to Colonel Springs, to make proposals on building it. What happens from here on remains to be seen.

Canadian Yarn Process Held Highly Promising

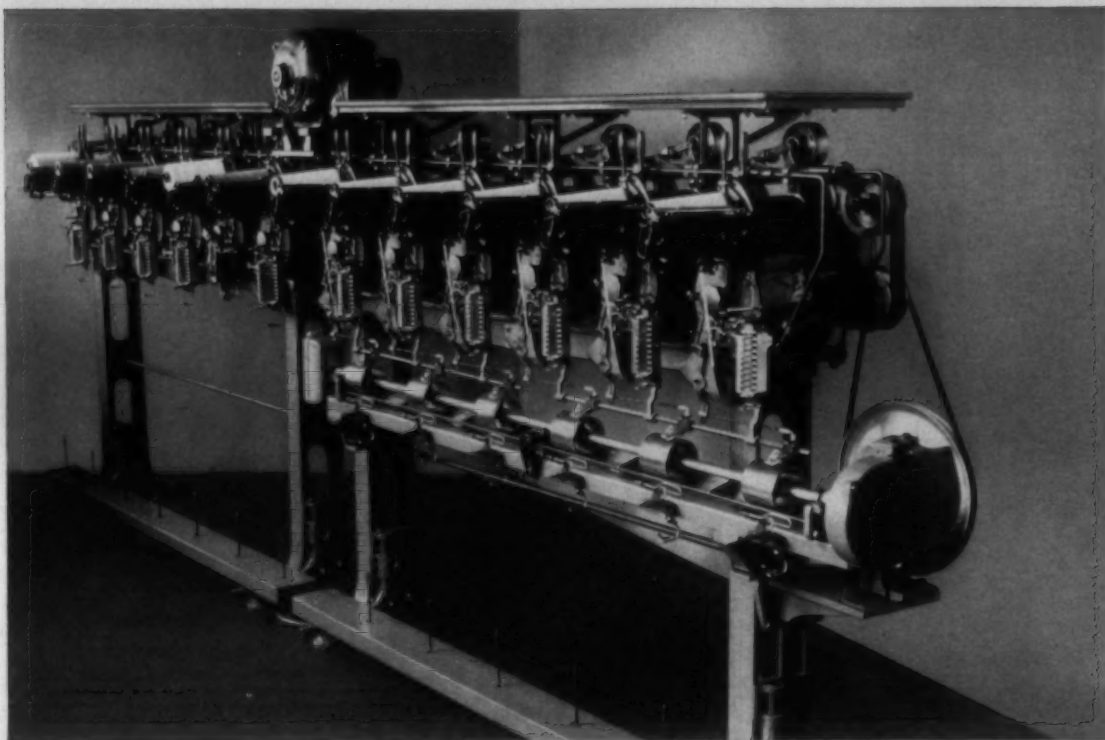
A new type of yarn developed in Canada is reportedly stirring up hopes of creating a revolution in the whole Canadian textile industry. Described as a multiple-core yarn, the new development is the creation of two scientists in the Special Projects Branch of the Department of National Defense. Patent applications covering the new process have been filed in Canada, the United States and Europe.

According to the scant information released thus far by Canada's Minister of National Defense, the yarn is now



Martin, Hallett, McKee

John Hallett, assistant manager of The Springs Cotton Mills at Fort Mill, S. C., stands in front of the Springmaid spinning frame and all but blocks out its 25-inch width. With him are F. H. Martin, director of research and quality control for Springs, and L. O. McKee, overseer of spinning in the Fort Mill plant.



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being spun in seven mills in Quebec and Ontario. Basically the process consists of spinning dual or multiple-core yarn with its fibers in parallel so that they all bear the same stress. Any variety or combination of natural or synthetic fibers can be used for the process, it is said. The process gives the new yarn five to ten times the strength of known exist-

ing yarns, reports have stated. Despite the fact that relatively little in the way of technical data has been released on the process, inquiries have been received from private industry in Canada, United States, United Kingdom, Australia, New Zealand, South America and continental European countries. After completion of extensive testing, the process is expected to be made available under a license agreement, with royalties accruing to the Crown.

Starting From Scratch, Runnymede Taught Inexperienced Workers To Spin Wool

By WILLIAM F. GAINES

THE adaptability of the people of the mountain area of northwest South Carolina to wool yarn manufacture is drawing high praise from officials of the new plant of the Runnymede Corp. at Pickens.

They say the Pickens worker shows just as much aptitude for the process carried out as his Northern counterpart. They brag about how fast he learns a job with which he has had no previous experience.

The Runnymede plant, a subsidiary of Kent Mfg. Co. of Clifton Heights, Pa., opened in Pickens last Fall. It makes French-spun yarn for the parent company and for sale to independent weavers and knitters.

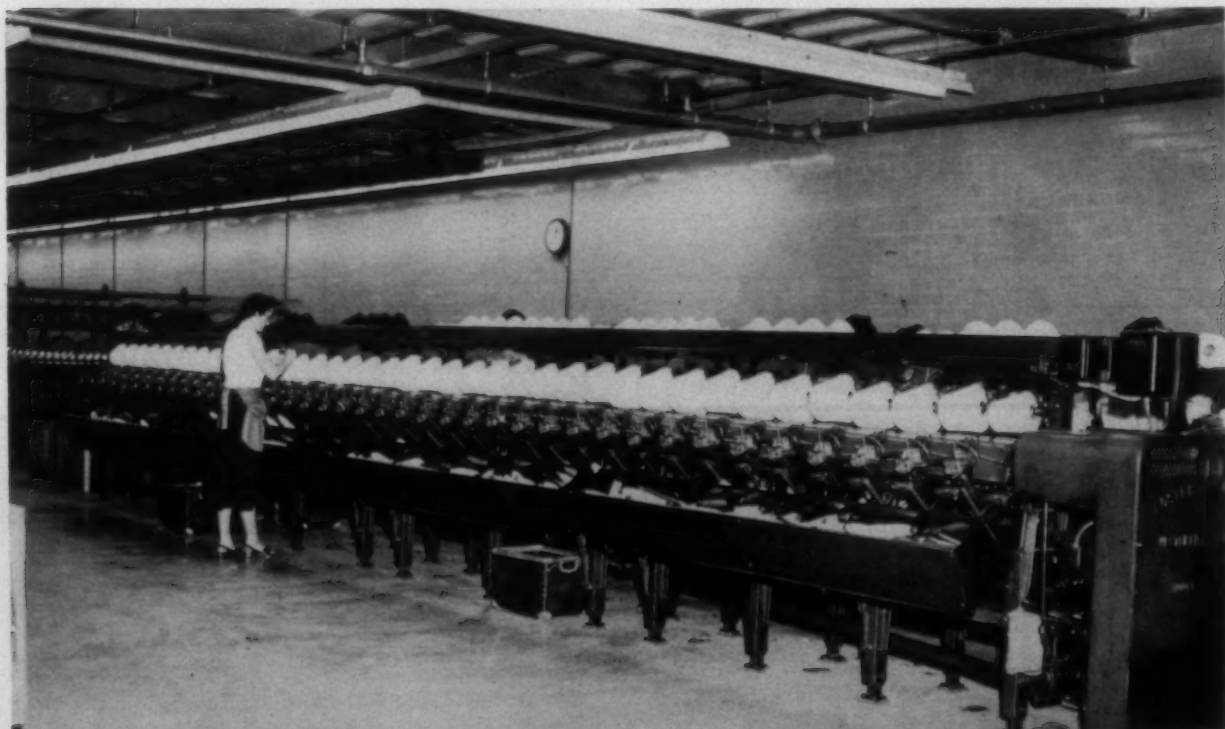
The new plant, still less than halfway toward full operating capacity, will employ 150 workers when top production is obtained.

Officials of Kent, which operates another plant in South

Carolina, Edenfield Mills Inc. at Leesville, had many reasons for choosing the Pickens site for expansion. A major one was the type of labor supply available.

But to be sure that the Pickens workers were not put to disadvantage by moving too fast, Kent officials have progressed slowly in establishing their working force. Four employees were brought from the Northern plant when production first started. These four men handled training in each of the major divisions of the Runnymede operation. Each of the four was given two or three employees to start with. They gave demonstrations, instruction and practice to these key employees until they had mastered their jobs. Then they brought in more workers to learn by association with the key people.

As a bigger labor pool was built up, more machines were put in operation. Training had progressed to a point where



Workers with no previous experience in woolen yarn manufacturing have learned their new jobs rapidly in The Runnymede Corp. plant at Pickens, S. C. "The Pickens worker compares most favorably with the Northern plant worker," according to one official.

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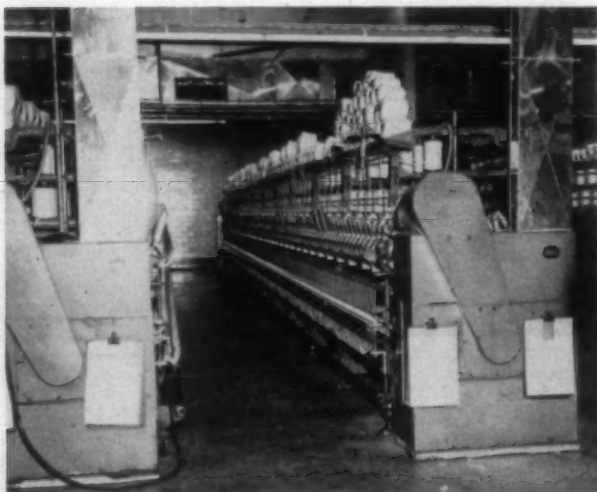
a second shift could be begun shortly before Christmas of 1954. Full operation is not expected for another several months.

The good record made by Pickens area people in the training program is underscored by the fact the work is almost completely different from any they have done before; the manufacture of wool yarn is far removed in some respects from cotton or synthetic yarn processing.

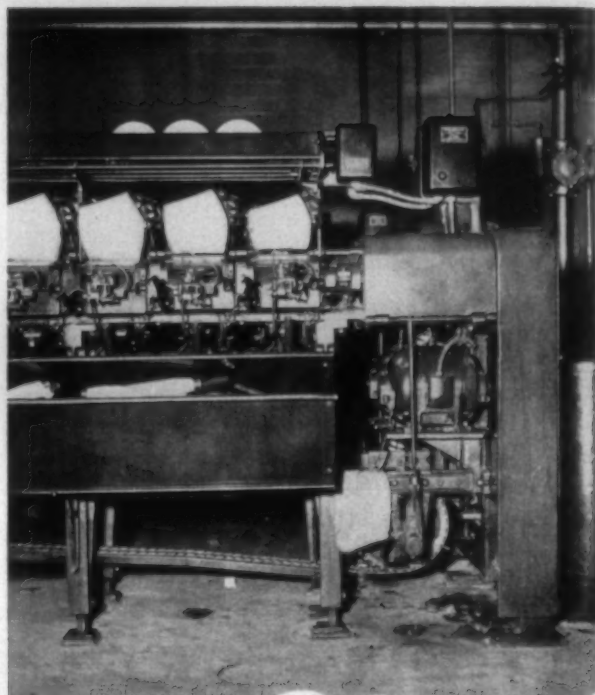
Wool has a longer average staple length than cotton and has varying fiber lengths which necessitate more leveling for spinning. Machines used are functionally similar to cotton mill machinery, but practically they are totally different.

A majority of the workers at Runnymede have had no textile experience. The plant's situation in an agricultural community brought industrial jobs to many who had never done anything else before but farm.

The glowing evaluation by plant officials is both a tribute



Pneumafil is installed on each frame in the Runnymede spinning department.



Close-up of spooler in operation at The Runnymede Corp.

to the Piedmont section and proof of the state's major selling point to new industry—people want to do any honest day's work for an honest day's pay.

Agildo Perfetti, a man who has worked with Kent for 27 years in Pennsylvania and who was one of the four original employees at Pickens, summed it up this way: "I have been surprised with how easily these people have taken to our methods. With no reflection on our other people meant, the Pickens worker compares most favorably with the Northern plant worker."

Mr. Perfetti is in charge of spinning and winding. The other four original supervisors brought here were Michael Risko Jr., now superintendent of the plant; Edwin Krejci,



Engineering of the new Runnymede facilities was done by the parent concern, Kent Mfg. Co., of Clifton Heights, Pa. Daniel Construction Co. was the contractor.

in charge of French drawing; and Jess W. Leigh, in charge of twisting and reeling. Warren Thompson Kent is vice-president and general manager of the Runnymede operation. He lives in Greenville—18 miles away—and commutes each day to Pickens.

The Pickens plant, built by Daniel Construction Co. of Greenville, is a one-story, modern building, completely air conditioned, situated on a 155-acre tract facing the Blue Ridge Mountains.

Warren Thompson Kent and his brother William I. Kent,

vice-president of Kent and president of Runnymede, are the fourth generation in the Kent Mfg. Co. Their father, Everett L. Kent, is president of Kent. The parent firm was organized in 1843 and has continuously operated. Runnymede, which now employs 80 persons, is gradually adding more employees as it climbs toward an ultimate 150 workers.

The Kent family is of English background and they chose the name of a great English locality for their new plant—Runnymede, on whose plains in 1215 the barons wrung from King John his signature on Magna Charta.

Warp Preparation & Weaving

MORE PRODUCTION IN THE WEAVE ROOM

Automatically-Controlled Hot-Air Slasher Accounts For Output Increase At Avondale's Catherine Mill

AN increase in production is one tangible benefit obtained by combining modern textile processing equipment with carefully engineered automatic control. This is clearly illustrated by the performance of the automatically controlled hot air slasher at the Avondale Mills' Catherine Mill in Sylacauga, Ala. According to J. H. Pasley, superintendent of the Catherine Mill, they obtained an increase of three per cent in weave room production shortly after the installation of this slasher.

There are several advantages Avondale cites for its hot air slasher. It is cleaner, since there are no exposed steam pipes or bearings to drip condensate and grease; it is cooler, because it employs an insulated drying chamber; and it presents less hazard to personnel, since there is no exposed steam piping.

A cascade type of automatic control system, which allows the slasher to run at a steady speed, was selected. Instead of varying the speed and keeping heat input constant to obtain the desired regain, this system holds the slasher at one speed and varies the heat input. The advantages of this system are: slasher output is constant, which means that a schedule can be set up based on this output; the stretching effect which often results from continual changes in slasher speed is eliminated.

Electronic Controllers Do the Job

The three circular chart instruments on the panelboard—all designed by Minneapolis-Honeywell's industrial division—handle the job of controlling the slasher. One of these, a Moist-O-Graph controller, continually measures the per cent regain of the warp. This controller includes an ElectroniK instrument (a detector roll, the primary or sensing element of this instrument, is visible just to the left of the operator in Fig. 1).

Controlled air output pressure from the controller varies as the per cent regain of the warp changes. This air pressure is transmitted to an Indexet unit in a second electronic instrument. This measures the temperature in the drying chamber by means of a thermocouple and holds this temperature at the desired value by pneumatically controlling the amount of gas going to the burners.

The Indexet unit permits one instrument to continuously reposition the set point index of a second instrument. As regain increases above the desired value—an indication that the warp is not being dried sufficiently—the air pressure transmitted by the regain measuring instrument increases by an amount proportional to the increase in regain. This increase moves the set point index of the temperature controller up-scale. As a result, the controller increases the BTU input to the drying oven to return the per cent regain to the correct value.

A third electronic instrument (also on the panelboard) functions as a size box temperature controller. Thermocouple-actuated, the instrument, through its pneumatic control unit, regulates the flow of steam to the size box.

Centered at the top of the panelboard is an indicating tachometer. This instrument, which is actuated by a small generator driven by one of the slasher rolls, is calibrated to read directly in yards per minute. Located at the lower right of the panelboard is a Protectoglo, a combustion-safeguard device which automatically shuts off the flow of fuel to the burners if either the main or pilot flame should fail. This, of course, guards against the danger of possible explosions.

Size box level is automatically maintained by a Brown size level control system. Two stainless steel electrodes are immersed in the size, one slightly above and one slightly below the desired level. When size level falls below the lower electrode, the control system opens a diaphragm motor valve allowing size solution to enter the size box. When solution

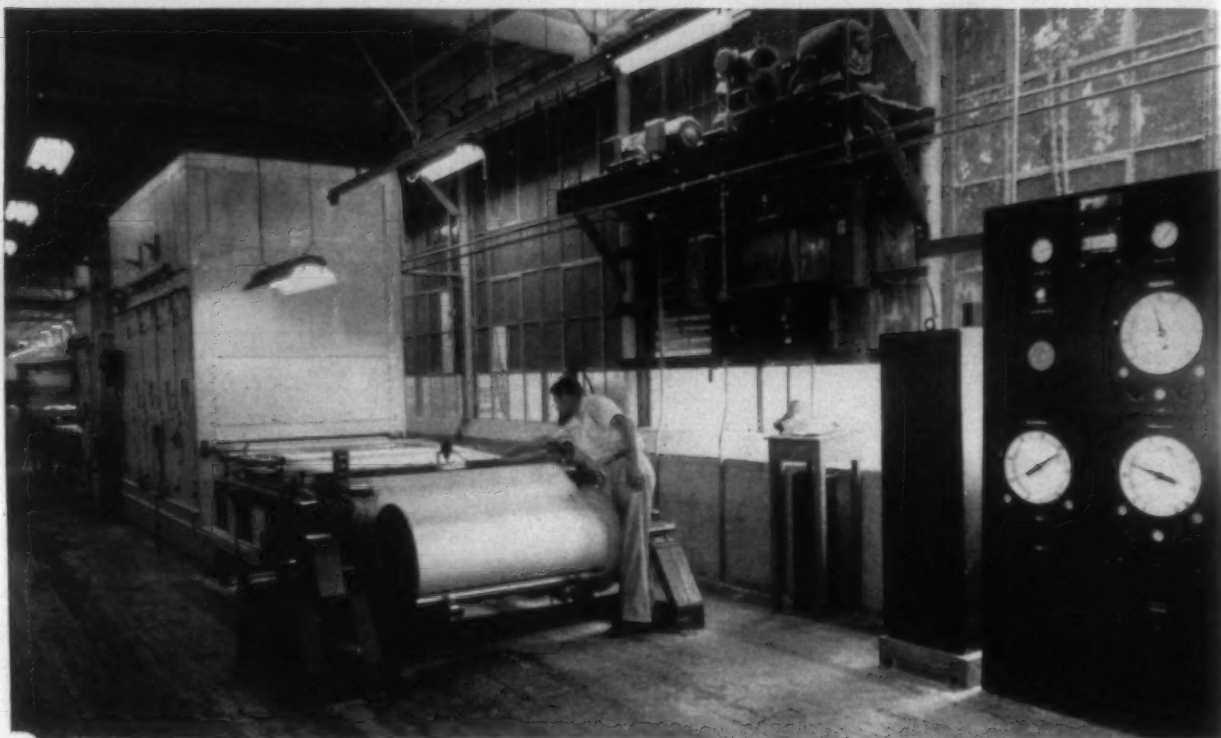


Fig. 1—The Catherine Mill hot air slasher with constant speed control system. Instruments control per cent regain dryer temperature, size box level and temperature, as well as indicate speed in yards per minute.

level reaches the upper electrode, the system shuts off the size valve. A signal light on the panelboard indicates operation of the size valve.

Size Cooking Also Electronically Controlled

In keeping with the balance of the slasher room instrumentation, the instruments that regulate the size cooking and holding temperatures during the preparation and storage operations are also electronic pneumatic controllers. These instruments, rather than the more commonly encountered filled system thermometers, are used for the following reasons: (1) they provide very accurate measurement and control; (2) they respond quickly to small temperature changes; (3) thermocouples are much smaller than thermometer bulbs and less susceptible to damage, and (4) it is easier and less expensive to replace thermocouples than it is to replace entire thermal systems.

One cooking kettle and one storage kettle are used. The cooking kettle is controlled by a panel-mounted instrument which operates in conjunction with a timer mounted below it. Once the proper times and temperatures for a given schedule are set, the cooking operation is reduced to a push-button procedure.

Pushbuttons on the panel enable the operator to initiate the automatic cooking operation and to stop the operation at any point in its cycle. Signal lights show when the cooking is in process and when the cycle has been completed and the size is ready for transfer to the storage kettle.

Standardization Helps

The practice of standardizing on M.-H. electronic instru-

ments for the size preparation as well as the slashing processes has been a contributing factor to their improved slasher operation, Mr. Pasley declares. An important benefit is in operator efficiency. The operators, having to become familiar with only one type of instrument, quickly learn its characteristics and capabilities. Instrument settings and adjustments are made quickly and positively. Furthermore, the operators, knowing precisely what the instruments can do, have greater confidence in them and therefore employ them to their greatest advantage. Another by-product advantage is in the simplification of instrument maintenance. Fewer spare parts need be carried in stock and preventive maintenance can be performed faster and more easily.

Design Awards Established By Metlon

The Metlon Corp., manufacturer of non-tarnishing metallic yarns, has announced the establishment of the annual Metlon Textile Design Awards. These awards have been offered to students in leading textile schools for the best originally designed and woven fabric incorporating Metlon. A prize of \$50 will be given to the student submitting the winning design in each school, and an additional \$50 will be awarded to the best single entry to be chosen from all the regional entries. Each school has been accorded the right to make the final selection either by an individual department head, a committee or faculty group. The grand prize winner will be selected by the Metlon Award Committee.

The participating schools include Clemson, Lowell Tech, Rhode Island School of Design, Philadelphia Textile Institute, Fairleigh Dickinson, Berea and Black Mountain. Entries are to be sent to New York the beginning of June. The final selection will be made June 15.

S.T.A. Shop Talk On Slashing And Weaving

A FEATURE of the Spring meeting of the Eastern Carolina Division of the Southern Textile Association, held Saturday, April 2, at the School of Textiles, North Carolina State College, Raleigh, was a discussion period on slashing and weaving. The following is a transcript of that discussion:

Chairman: Gentlemen, the first subject we have under slashing is creeling and pulling over. The subheads under that are (1) method; (2) magazine (yes or no); (3) how are ends picked up on colored beams; and (4) leasing frequency—how often? To get our meeting started I will call on Mr. A to discuss that question briefly.

Mr. A: As to our method of creeling and pulling over, we have sets run from five to eight beams. We have a man that we call our slasher-back man who helps our regular slasher man. We take one beam, or two or three beams; it depends on the number in the set. If we creel a five-beam set, our first beam goes to the top and under the second. If it is an eight-beam set we run three beams under.

Chairman: Suppose you describe your creeling step by step.

Mr. A: We run as far as we can. When the beams begin to show up naked and ends begin to break, then we stop the machine and take the beams out. We clean the machine and start creeling a new set, and then go through with creeling just as I have pointed out to you. Now, about pulling over the set after you get it creeled in, we have some warp ends barely long enough to tie in our set—just barely long enough to go across the set. Of course, the warp has leases. We lay them over the warp. That spreads the yarn out evenly. Immediately after the last of those goes through we start our regular lease. After the last lease goes through our size roll about a yard and a half, we stop then and wind down on the rolls and go to the front and take the lease rods out of the old set. After the last of the warp end leases goes through we start our slasher and strike a lease or pick.

Mr. B: You speak of taking one beam, two beams or three beams, depending on the number of beams in the set. I believe you said if there are eight beams in the set you run three beams under. Is that right?

Mr. A: We do that because the yarn is so long; we do it to lessen the shim or shake.

Mr. B: Do you have any rolls?

Mr. A: No, we do not, except where it turns to go up in the box. We do have a roll there.

Mr. B: There have been a number of different opinions as to striking or picking. What is your opinion as to which is best?

Mr. A: We pick or strike; but we are trying to get our heaviest warp—trying to get a pick in that, but whether we can stick to that I can't say.

Mr. B: How many ends do you pick from each beam?

Mr. A: We don't pick from the beam. Our warp is in a sheet or lay, you might say; and it runs from four to six ends per dent. It depends on the number of ends per set.

Mr. B: You don't place lease rods between the individual ends?

Mr. A: Yes. I overlooked that. After we strike our lease we put leases in. We have what we call a weaver's lease.

Chairman: Are there any questions anyone would like to raise on this before we leave the subject?

Question: What about your leasing frequency, Mr. A? How often on your loom beams do you lease?

Mr. A: We lease once on the beam.

Chairman: What size is that loom beam?

Mr. A: It is 28 inches.

Mr. B: Roughly, how many yards do you have between your leases?

Mr. A: Around a thousand yards.

Mr. D: How do you separate the ends from the colored beam? In some of our sets we have 150 colored ends in a 5,000-yard set. Twelve or 14 ends come right together. You have to take six or ten ends from the same beam to go in a dent. Does anyone else do that?

Mr. C: If you have one solid color take your lease rod and take one up and one down. That splits it entirely, if you take it one and one. We find that is the only way we can do it. We run from one to 18 beams.

Mr. B: Do you run drop wires to keep your strikes?

Mr. C: In some of the sets we do.

Mr. B: If you have three or four colored beams how do you do it?

Mr. C: Say you have four colors—18 times 5,400 ends. Lay it around seven to the dent, if you have four solid colors. When you get your ends laid in here, take a small lease rod and take one down and one up. Leave the lease rod in there. Do the same thing with the four beams.

Mr. D: How much time does it take to creel a slasher?

Mr. C: With the patterns we have, it takes from three to five hours. That is 5,400 ends.

Mr. E: As it goes into the size box back of the slasher, sometimes there is a tendency for the ends to want to roll together—to roll up. What method do you use to prevent that?

Mr. C: If it's a wet warp the air will have a tendency to roll those ends. If you have a roll of about 12 or 14 inches over that beam, and let it come under one and over the next one, it will help that.

Chairman: In other words, if you let it go under one roll and over another it will help.

Mr. E: We've made a little stand and fastened it to the floor. It's adjustable. As I remember, we have to change it two or three times from a full set to an empty set. The rod is just a fraction over a quarter of an inch in diameter. It's made similar to the lease rods in front, with the end flattened out. That's a great help.

Chairman: Just where do you put that rod?

Mr. E: Between the first beam and the size box.

Chairman: That helped on the rolling?

Mr. E: Yes, it practically eliminated it.

Mr. C: I found one other thing that helped. When the warp is coming out of the size box, if you have a roll about an inch in diameter and roll it very slowly over that, it will eliminate a lot of rolling.

Mr. E: Do you use that as a split rod?

Mr. C: Just as a roll. Run it very slowly, because if you run it fast it will pick up ends.

Mr. E: What size is that?

Mr. C: The one we have is about an inch in diameter.

Mr. B: Does it accumulate size?

Mr. C: No, not while it's turning. We have a little belt on it, so it will just turn; and the size will not accumulate. That eliminates size spots on your yarn.

Teflon-Coated Cylinders

Chairman: We will go on to Teflon-coated cylinders. The sub-headings under this topic are: (1) number of cylinders coated; (2) advantages; and (3) estimated life of Teflon.

Mr. F: We have two cylinders covered. Size would stick to the cylinders before but after we put Teflon on, we didn't have any trouble.

Chairman: What size cylinders do you have coated?

Mr. F: Nine inches and 30 inches.

Mr. I: We have found that on synthetics in general the coated cylinder will last about five years. On cotton, not too many people have coated their cylinders. We don't have the sticking on cotton that we have on synthetics. We do expect from three to five years on a normal surface. If the cylinders are very fragile you have to watch it for scratching and that sort of thing. It is a very thin coating, 1.5 to 2.0 mm. in thickness. As to the number of cans, we leave that up to you. If one can will do the job, we will coat that can. Some people have coated as many as five.

Mr. B: Is it strictly a coating for the cylinder? You don't have any fabric impregnated with it?

Mr. I: Du Pont came out not too long ago with a fabric to be applied. We have tried it on one or two dozen cylinders, slashing

WARP PREPARATION & WEAVING

and finishing, wrapping the cylinders with this fabric. It gives the same surface as spray coating, but you have to have a lap joint. We do not feel it is entirely satisfactory, because when the can cools over the week-end it does contract and there is some wrinkling.

Mr. B: Your present method is to remove the cylinder?

Mr. I: Cylinders have to be removed for spray coating. The fabric can be applied at the job.

Chairman: We've made one application of Teflon on the guide wires and we like it very much.

Mr. J: I'd like to know what advantages it has, other than doing away with sticking to the cylinders.

Mr. I: The cylinder speeds can be increased up to as much as 30 per cent. There is no tendency to lap or stick, so the slasher speed can be increased.

Homogenizers and Viscometers

Chairman: In other words, it gives you a smoother operating surface. The yarn will go over it. Are there any other questions? If not, let's go on to homogenizers and viscometers. Who has homogenizers and would like to say something about them?

Mr. K: Homogenization is breaking down by mechanical means rather than by heat. It cuts down the time considerably. In boiling starch we boil for one or two hours, but with homogenization we don't boil at all.

Mr. B: Do you get even penetration of the yarn?

Mr. K: Yes, it distributes the starch much better. We think it's much better than boiling the starch.

Mr. B: How long have you been using it?

Mr. K: Five years. We use potato starch.

Chairman: What type of yarn?

Mr. K: One hundred per cent wool.

Question: I'd like to ask if, when put on, it increases the percentage of size?

Mr. K: No, we put on just the same percentage.

Chairman: Do you control that automatically?

Mr. K: Yes, I'd like to ask a question myself while we are on the subject of starch. Does anyone use wax in starch?

Chairman: I imagine you have reference to wax applicators through which you run the yarn for wax application. Is that right?

Mr. K: Well, that or even adding wax in the cooking of the size.

Mr. B: We've tried it but discontinued it. We couldn't tell any appreciable difference in the sizing.

Mr. C: We've tried wax in our cooking vats a number of times. I never have seen that it helps any. We use thin-boiling starch, of course. As to starch sticking to the cans, if you add a half-gallon of kerosene, it will cut that out.

A Member: I disagree with that.

Mr. B: What is the general method of controlling size pick-up on the yarn? Do you try to control it from the size box itself or from the roll weights, or what?

Mr. C: The more pressure you have on the roll, the more size it is going to pick up; the less pressure you have the less it will pick up.

Mr. G: How much can the pick-up be varied by varying the weight on the roll? How much variation in pick-up can you make by varying that?

Mr. G: I think that has a very limited application.

Mr. B: I think if you're trying to get greater size pick-up, you can only do that by varying the weight on the rolls. You have to go back to your original formula and vary that.

Mr. C: I think that varies with your pick-up. Of course, you can get a percentage of it back with the rolls, but not all.

Chairman: Did we get that question settled, about the relationship of pick-up to the roll pressure?

A Member: I think that depends on the blanket. A new blanket does not squeeze out the size as does an old blanket.

Chairman: I think you'll find a variation in pick-up depending on what you use—whether blankets or rubber or yarn-wound rolls. I don't believe you can do it all by your roll pressure. I think we have to vary our formula.

Rubber-Covered Rolls

Mr. B: I'd like to know if anyone has equipped his slashers with the newest type of rolls put out by Dayton and, if so, what results he is getting, as compared to blankets or yarn-wound rolls.

Chairman: We have one rubber roll which has been running for six months and is doing a fine job, without buffing. We had to increase our weighting considerably. It's much more economical and is doing a good job.

Question: Is that on the front roll?

Chairman: Yes, that's on the front roll, the finishing roll. We have only one slasher equipped, but we do intend to equip all of our slashers with rubber rolls.

Question: Back and front?

Chairman: Yes, back and front.

Question: How much do those cost, approximately?

Chairman: About \$250, I think.

Question: You send them your roller and have it covered?

Chairman: That's right; you send them your roller and they

— E. H. Fuller New Chairman of S.T.A. Eastern Carolina Division —

AMONG SPEAKERS appearing at the Spring meeting of the Eastern Carolina Division, S.T.A., were William J. Martin, cotton utilization extension specialist, U. S. Department of Agriculture, Clemson, S. C., who spoke on "A New Federal Service for Cotton Mills"; John F. Bogdan, director of processing research, North Carolina State College



Hutchinson, Fuller, Bruton



Bogdan



Little



Martin

School of Textiles, "Waste Reduction in Carding"; and Jim Little, Anderson, Clayton Co., Atlanta, Ga., "Cotton and Its Spinning Qualities."

In an election of officers for the division, E. H. Fuller, superintendent of Mill No. 2, Roanoke Mills Co., Roanoke Rapids, N. C., was named chairman to succeed A. M. Moore Jr., superintendent of Mill No. 6, Erwin Mills Inc., Durham, N. C. Others elected included J. K. Bruton, general superintendent of

Mills Nos. 2 and 5, Erwin Mills Inc., Erwin, N. C., vice-chairman; and J. B. Hutchinson, assistant superintendent, Patterson Mills Co., Roanoke Rapids, N. C., secretary. Elected to the division's executive committee were J. C. Farmer, superintendent, Henderson (N.C.) Cotton Mills; W. A. Rhinehardt, superintendent of the cotton mill, Golden Belt Mfg. Co., Durham, N. C.; and Noah Gibson, superintendent, The Roanoke Mills Inc., Franklinville, N. C.

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cover it. All you need is a buffing roller, and you buff it yourself when you feel it needs to be done.

Mr. K: Do you have any regular schedule of buffing, or do you just buff when you need to?

Chairman: Just when we think they need it. Of course, you have to keep them clean. You clean them by hand. It depends more or less on the type of work you are doing.

Mr. C: Do you have fewer roll marks or more?

Chairman: We're on the type of work that any time we stop the slasher we have a roll mark. That's why I was hesitant to answer that question.

Question: What speed do you run?

Chairman: I suppose our average speed would be approximately 40 yards a minute.

Question: What yarn count is that?

Chairman: 8s to 15s.

Question: Do you have to take those rolls out to buff them?

Chairman: Yes, you have to take them to the shop and put them on a lathe to buff them.

Mr. K: What is your percentage of stretch?

Chairman: Our average stretch is about 1.5 per cent.

Question: Do you have to change your weights on your section beams when you start out, or from full to empty?

Chairman: We never change our tension on section beams. It's possible someone else would answer that differently.

Mr. A: After we run about two or three beams we turn it around.

Chairman: In other words, when you are about half full you change your direction on it?

Mr. A: Yes.

Question: Do you find you get better results?

Mr. A: Yes, I think we do.

Mr. L: I understand they furnish two types of rolls. One, the front roll or the finish roll, is mixed with wool. The back roll is solid rubber.

Chairman: That's right.

Mr. L: Wouldn't it be better to have both rolls finished the same, so you could switch them if you wanted to, from time to time?

Chairman: Well, possibly, if you want to switch rolls. I think the idea of the solid rubber roll in the back is that it lasts so long. We've had one in and running for two years and have never done a thing to it.

Mr. L: If you have a lap on the back, wouldn't that leave the impress on the rubber? Isn't it possible that if you had the same type of roll you could switch it right quick and not stop?

Weave Room Supplies

Chairman: Well, possibly. Let's go on to the next section, which deals with supplies. The question is, life in loom-hours for the following items: (1) shuttle; (2) check strap (straight and endless); (3) picker; (4) picker sticks; (5) lug strap; (6) supply cost per 1,000 loom-hours, type of loom, speed, etc. I have some figures here on that. They are as follows: shuttle life, 4,575 loom-hours; check strap, 912; picker, 602; picker sticks, 1,816; lug strap, 15,000. That is an X-2 loom, running 180 picks a minute, a 48-inch loom. I'd like to compare that with others. For this one mill, the supply cost per 1,000 loom-hours is \$19.07.

Question: Is that the same type of loom you've been talking about? Is that an X-2 loom?

Chairman: Yes, sir.

Mr. M: Our supply cost is \$18.52. That's on a 42-inch loom. The wide looms exceed these figures.

Question: What kind of shuttle—just plain dogwood, or what?

Mr. M: Just a plain dogwood shuttle.

Question: What kind of picker sticks?

Mr. M: Hickory.

Chairman: I have another mill I'll quote some figures on. This is also an X-2 loom, 40-inch, running 194 picks a minute. The life in loom-hours for the shuttle is 7,025; check strap (endless), 4,906; picker, 245; picker sticks, 1,088; lug strap, 4,613. The supply cost per 1,000 loom hours is \$11.44, total.

Mr. N: What are you running on these looms?

Chairman: Coarse cotton goods, approximately 64 sley.

Mr. B: What type of shuttle?

Chairman: This is a Dura-Weld shuttle, not a wooden shuttle.

Question: What type of lug strap?

Chairman: It's fabricated rubber.

Mr. M: Our shuttle life is 2,500 loom-hours; check strap, 2,200 (straight check strap); picker, 982; picker sticks, 3,500; lug strap, 14,000. As I said, that's a 42-inch loom, running 196.3 picks per minute; and the supply cost is \$18.52.

Question: What is the comparison between the life of a dogwood shuttle and that of a plastic shuttle?

Chairman: Our experience has been this. On a dogwood shuttle, we averaged about 1,500 loom-hours; on a plastic shuttle we averaged about 7,500 loom-hours. That's not quite a fair comparison, because the dogwood shuttle was in an old loom, and I think on a newer loom we would get longer life from the dogwood shuttle. The subject of the next section is quality control in weaving, and under that heading we have these questions: (1) are standards set for quality and production? (2) what action is taken on weaving to maintain standard? (3) how do you control thin places: (a) on single-fork looms; (b) on double-fork looms; (c) on center-fork looms? (4) how are seconds shown up? (a) by whom? (b) is there a follow-up to avoid repeats? (c) what employees other than the personnel in the weaving department share the responsibility for seconds? (Example: off-shade filling, dye streaks, hard size, doublings, waste spun in warp or filling, etc.) As to the first question, are standards set for quality and production?, I don't know what was intended. I wish we could set a standard for quality and hold it, or do something about it.

Mr. B: I think what was intended is that each individual plant has a floor under production below which a weaver could not drop, and that it has a figure for seconds which he must not exceed.

Chairman: My answer to that question would be this. We have daily, weekly and monthly reports. If we have a weaver that gets out of line, if his seconds are far enough above the average for the room, we warn him. The same is true as to production. If we have a weaver who is too far below the average we warn him. Now, we don't like to warn; I can assure you of that. What other system is there as to standards of production and quality?

Mr. E: We have about the same plan.

Mr. K: Are the seconds determined in the greige?

Chairman: Yes. Does anyone have a standard set for quality? Do you have standards for production in the weave room?

Mr. E: Yes. We have expected production. Do you?

Mr. B: Yes.

Chairman: What is it?

Mr. B: 92.

Mr. E: 92.

Chairman: Ours is 91.5. How do you control thin places on single-fork looms?

Mr. E: I think the weaver is responsible for the looms.

Mr. M: Has anyone adopted the Teflon-coated grate?

A Member: We have 200.

Mr. I: Not many people, to my knowledge, have gone to a complete set of Teflon-coated grates. The question of these grates is pretty much up in the air. I'm not prepared to say whether it's advisable or not. We have had this come up, that the Teflon is so slippery that the filling yarn will tend to drop. Has anyone here had that experience?

Mr. O: With the center filling fork, what method do you use for upkeep, to maintain the fork? We have to go over that fork completely each time the warp runs out. Our warp will run from five to six weeks. These cams and worn parts have to be replaced very often. It costs you, I think, five or six times as much to maintain the center fork. I think, though, it is the best method of keeping down thin places and broken picks.

A Member: It is more expensive. It's in a place where you can't get to it until the warp is out. It does keep down the thin places.

Mr. K: Do you think the advantages balance the disadvantages, from the standpoint of missed picks and thin places?

Mr. O: Yes.

Mr. K: In the end it is cheaper?

Mr. O: Yes.

Chairman: How are seconds shown up?

Mr. E: We have two methods; in the cloth room and by rolling back at the loom. We have a system of rolling down at the loom on each shift.

Question: What type of cloth?



Rhinehardt, Hutchinson, Wiley, Bruton

Panel members for the discussion on slashing and weaving led by J. K. Bruton were Messrs. Rhinehardt and Hutchinson, along with W. T. Wiley, assistant superintendent, Plant No. 4, Erwin Mills Inc., Durham, N. C.

Weaving Inspection

Mr. E: Sheeting cloth. We have weaving inspection once per shift.

Chairman: On a certain number of looms?

Mr. E: Yes. On different weavers.

Question: Does the weaver roll the cloth back?

Mr. E: No, he doesn't roll it back himself. The supervisor rolls it back.

Question: On each loom?

Mr. E: Not each loom at each shift.

Mr. K: Do you think that's satisfactory?

Mr. E: Yes.

Mr. K: You don't think it takes some of the responsibility from the weaver?

Mr. E: No.

Mr. K: Do you think the weaver will be more careful because he knows someone is going to come along and inspect?

Mr. E: Yes.

Question: Doesn't the cloth get mighty wrinkled?

Mr. E: Well, that depends somewhat, I think, on the type of cloth and how you handle it. This is sheeting cloth.

Question: How much do you roll back?

Question: Well, anywhere from ten to 12 or 15 yards. It depends on the speed of the loom.

Question: How much time do you lose?

Mr. K: Not much. It takes just a minute or two.

Mr. K: What are you looking for?

Mr. E: All sorts of seconds, thin and thick places, missed picks and so forth.

Mr. M: We use that as a follow-up. In some cases we may roll back as much as 40 or 50 yards. We use it as a follow-up on a loom that is producing seconds.

Chairman: That is more or less our method. We don't roll down, but we inspect the cloth in the cloth room and send a report back immediately to the weave room.

Question: Do you have somebody in authority in the weave room to do this? Do you let just anyone do it, or does the assistant overseer do it? Or who? Does someone in authority do it and warn the weaver?

Mr. E: In our case we have an assistant overseer, and it goes through the overseer.

Chairman: In our mill we have a ticket that goes back to the weave room. It goes to the supervisor. Then a slip is posted on the loom. We have one for each loom. Each type of defect has a number. Number three, for instance, is a thick place. This ticket is checked by the fixer and the weave, wherever the responsibility may be, and also checked by the supervisor. Of course, we don't have a system of rolling down, but when we get a ticket like this we roll down to inspect.

Mr. M: When is that loom cleared?

Chairman: That loom is cleared when the fixer initials this ticket, after he has fixed it.

Question: What do you do when a ticket comes back a second time with the same defect?

Mr. P: We take the cut to a frame in the weave room and run it on that.

Chairman: We have an inspection frame in the weave room.

Mr. K: How much time elapses between the finding of the defect and the correction?

Chairman: Well, from 12 to 15 hours, sometimes. Of course, we have a system of patrolling all the time. In a great many cases the defect has been corrected when this ticket comes back; in other cases it has not been.

Mr. M: If we find a defect we send the report back immediately to the weaving overseer, so he can get it corrected as soon as possible. The assistant overseers on the second and third shifts will follow it up.

Mr. Q: Sometimes we have an absolutely new pattern and even the overseer will not know what it looks like. By getting it started right, the chains right and so forth, we may avoid some trouble. I wonder if anybody has any set procedure on box looms?

Mr. R: The first three yards that come off the loom we take back to the designer to be checked. It is put back on the loom and goes to the cloth room and goes from there to the overseer and the manager, plus one back to the designing department. In other words, your design is checked. We usually start them up on the first shift and can call the man right away if he is needed. Each pattern of each color is checked with that department and has to be initialed before it is put into production. Of course, after you get one checked you can go ahead with a similar design in other colors.

Mr. S: What about jerk-ins? What do you do to avoid that, on the magazine end?

Mr. T: We have a lot of trouble with that. The main thing is to use a wool blanket.

Question: Is that on the box end?

Mr. S: No, on the magazine end.

Question: Do you use a catch fork?

Mr. S: No, we do not.

Mr. U: We are running 134 and 170, double. We don't have too much trouble from the magazine. We set the quill back far enough so it comes on out on the floor.

Fiber-Fabric Conference Concluded

Textile producers as well as fiber manufacturers must explore new fiber frontiers in the quest of a higher percentage of the consumer's dollar, Winfield W. Heckert, general director of research for Du Pont's textile fibers department declared recently. "If textile producers fail to meet this challenge, the well-established downward trend in the share of consumer dollars spent for clothing will not be easily halted," Dr. Heckert said.

Speaking at the final conference on fiber-fabric relationships to be sponsored by Polytechnic Institute of Brooklyn, N.Y., during its centennial year, Dr. Heckert also expressed the fear that the textile industry has been losing out in its competition with other industries.

Another speaker, Dr. Jules La Barthe, senior fellow of the Mellon Institute, also warned the assembled textile technologists and scientists that textile producers must do a better job of policing the use of their fabrics by clothing manufacturers, and should particularly watch the advertising claims often made without scientific justification.

Emphasizing the importance of communication between manufacturer and consumer, Dr. Heckert said "we can sell virtues and unsell the misunderstandings that exist today. Only by some such action on the part of the textile industry can the chiselers, the copyists, the make-a-fast-buck boys be overcome."

The all-day conference was under the chairmanship of J. B. Goldberg, textile engineering consultant; the entire series of meetings was under the chairmanship of Jack J. Press, Navy fiber specialist. Other speakers at the conference included George S. Buck Jr., National Cotton Council of America; Thomas G. Hawley Jr., United Merchants Laboratories Inc.; and Edgar L. Schlesinger, Old Fort (N. C.) Finishing Co.

Bleaching, Dyeing & Finishing

Flue Gas Treatment—A Solution To Highly-Alkaline Dye Wastes

By JOSEPH C. KING, Research Director, Fairforest Co., Spartanburg, S. C.

This contemplated solution to a problem which is common to plants engaged in the wet processing of fabrics was described April 1 at Durham, N. C., during the fourth Southern Municipal and Industrial Waste Conference.

IN attempting to give a solution to the problem of highly-alkaline effluents of textile finishing plants, we must first realize that each plant constitutes a separate and individual problem. After realizing this fact, we can take several general means of correction and modify them to suit the individual case.

First, one must decide what one desires to accomplish. We shall assume that in a swift stream averaging 30 to 50 million gallons per day we desire to empty $2\frac{1}{2}$ million gallons of effluent so adjusted that the stream pH will not rise above 8.0, or the dissolved oxygen below four parts per million. At the present time the effluent averages a pH of 12.2, with a subsequent stream value of 10 to 11. The dissolved oxygen normally runs 6.0 to 8.2 even in the Summer, so that this factor is not critical, except when a considerable quantity of sulfur piece goods is being run. At such times the dissolved oxygen may drop to zero. For this reason, we must make provision for these surges, although they last only 30 to 60 minutes.

Knowing the stream conditions and quality of the effluent, the first attack is to trim any excess alkaline compounds and reducing salts, as far as practical, so as to lessen the amount being lost as waste materials.

Having made all economies as mentioned above, it is suggested that the efficiency of the mercerizer recuperator system be investigated—be certain that counter-flow washing, Scott suction devices and the drainage system are working to the best advantage.

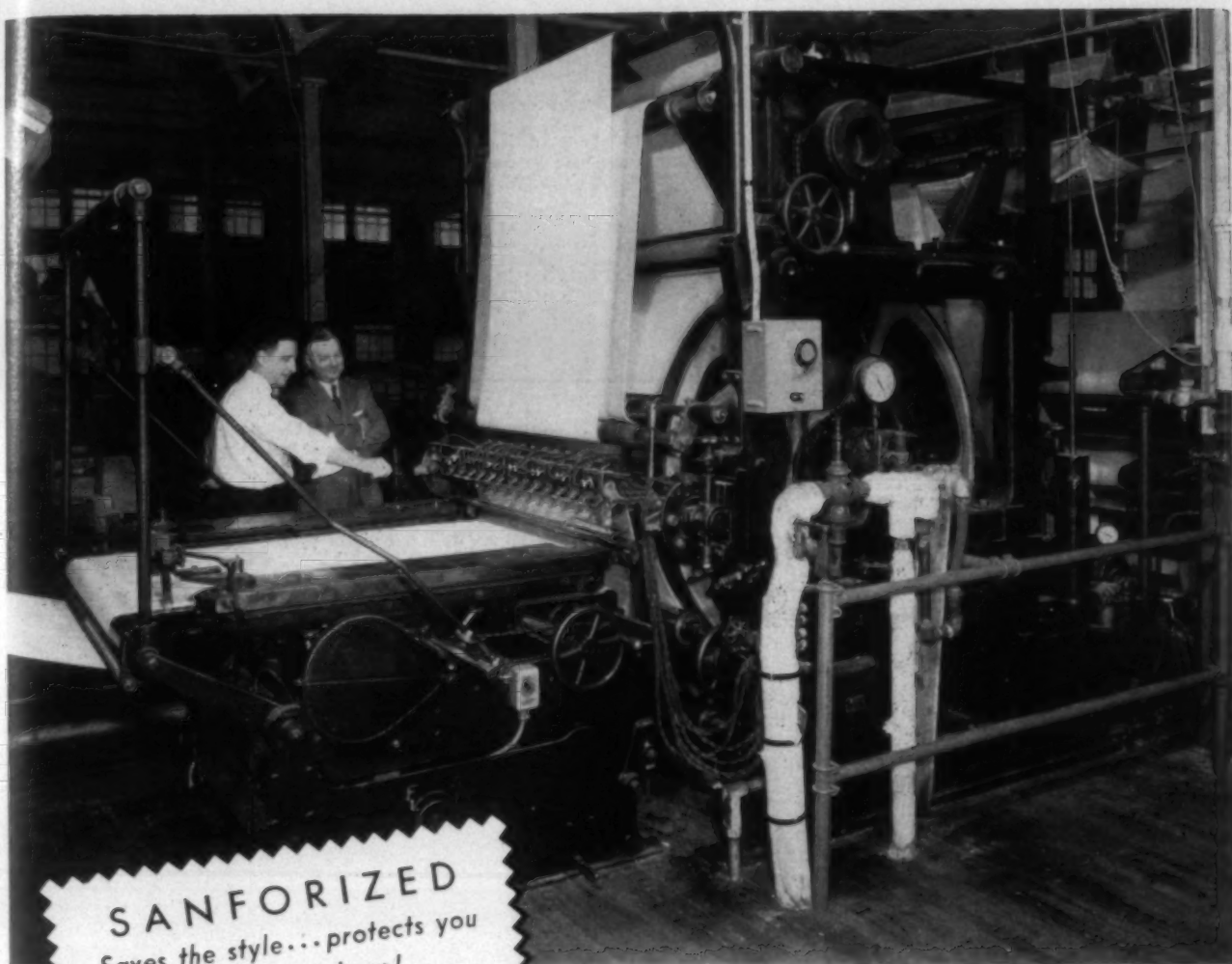
If the caustic soda consumption in mercerizing is running at 2,500 tons yearly or more, then it would be well to consider the installation of a double effect evaporator system, provided the spent recovery liquor averages above 3½ per cent sodium hydroxide. In very few instances will a recovery system alone eliminate the pH problem; however, it can reduce the alkalinity to such a point that the pH is much easier to correct. We estimate that the recovery system of this type now in use at our finishing plant is

not only making our alkalinity much lower, but will pay for itself in 15 months through reduction of fresh caustic soda consumption.

It would also be well to either use a redox potential system or frequent titrations to assure that excessive amounts of reducing compounds are not being used in dyeing and printing. Having satisfied ourselves that nothing further can be done to improve the effluent quality in the plant itself, we must decide what we can do to meet proper stream conditions as economically and practically as possible. Obviously we must have a source of acid. Sufficient commercial sulfuric acid to satisfy the alkalinity would cost several hundred dollars daily, so we turn to another source, either carbon dioxide gas which can be manufactured comparatively pure from natural gas or fuel oil, or we can tap a comparatively free source,—flue gas from the boiler room, which contains 12 or 13 per cent carbon dioxide. There are advantages to be gained from submerged burns such as low initial cost, almost pure carbon dioxide and ease of dispersion. On the other hand, carbon dioxide costs considerably more when produced in this manner, even from natural gas, than the waste product, flue gas.

To make use of this by-product gas, we must first realize that several conditions must be met. These are: (1) A plentiful supply of CO_2 is available at least 50 per cent more than empirically required. (2) That this gas has numerous impurities, including solid particles, which will present serious problems unless properly disposed of; this will be discussed later in this paper. (3) That a properly engineered system is required to take care of gas dispersion, settling of solids, sludge removal, and an automatic control system.

All of this means that a flue gas system will cost more initially but can be expected to operate at a lower cost after installation. We are now, to the best of our knowledge, installing at our Fairforest-Spartanburg plant the first full-scale plant utilizing boiler flue gas to reduce excess alkalinity to permissible levels in finishing plant effluent. Before picturing our proposed layout, I would like to hasten to add that my part in this venture has been a small one. Credit for much help goes to the South Carolina Water Pollution Control Authority; to Joseph A. McCarthy, our valued consultant from Andover, Mass.; Lockwood-Greene Engineers Inc., Spartanburg; and finally the officials



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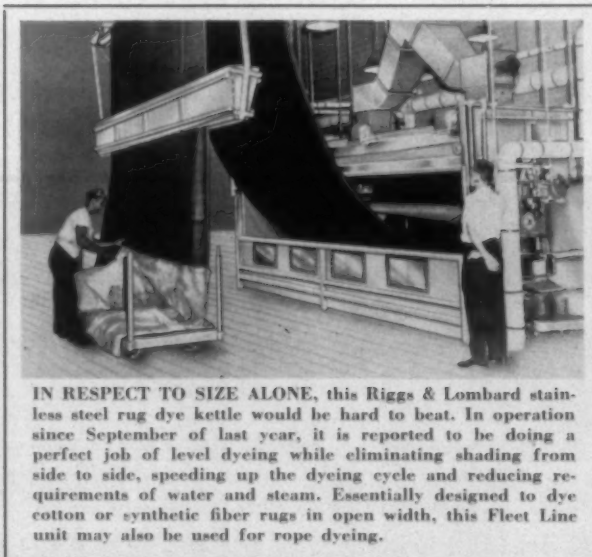
of Reeves Bros. Inc. and the management of the Fairforest Co.

This plan is being suggested by Fairforest as an industry service, and while we feel it fully practical to the extent of investing a considerable sum in its construction, we can in no way assume responsibility for its correct performance.

It is our suggestion that we proceed as follows: Gas is taken from a stack breaching by suitable pipe to a stainless steel wet scrubber where treated waste water is used to scrub the flue gas free of fly ash and other impurities, and at the same time to bring the temperature of the stack gas down to a point where it will be less corrosive and easier absorbed. The wash water which picks up some solids and carbon dioxide is returned to the system in the carbonation basin so that there is little loss of acid gas. The scrubbed and cooled gas is now less corrosive and abrasive to the blower. After being washed, the gas passes through a centrifugal blower and into a concrete carbonation chamber of about 15 minutes' retention capacity. This carbonation chamber is arranged with a series of pipes about eight to 12 feet beneath the surface, containing a plurality of diffuser heads. After carbonation, the waste goes into a round settling basin of about one to two hours' retention capacity with a revolving sludge collector. This gives sufficient retention time according to Imhoff cone tests, to result in collecting about 85 to 90 per cent of the wet sludge. The sludge flows by gravity, or is pumped, if required by the terrain, to sludge drying beds consisting of tile beds, crushed stone, cinders and sand. The dry alkaline sludge might possibly be sold as a soil conditioner.

The waste water now goes through an aeration channel into a lagoon of a depth not exceeding nine feet, where after one or more day's retention and further settling, the effluent proceeds down a cascading aeration channel into the river. We believe this shallow lagoon will pick up oxygen from the air and assist in taking care of any surges in color, or drop in dissolved oxygen. In addition, it is planned to put a small box in the aeration channel so that chlorine may be added to pick up the dissolved oxygen supply, if necessary.

We foresee the system as nearly automatic as possible,



IN RESPECT TO SIZE ALONE, this Riggs & Lombard stainless steel rug dye kettle would be hard to beat. In operation since September of last year, it is reported to be doing a perfect job of level dyeing while eliminating shading from side to side, speeding up the dyeing cycle and reducing requirements of water and steam. Essentially designed to dye cotton or synthetic fiber rugs in open width, this Fleet Line unit may also be used for rope dyeing.

with a multi-record pH meter and controller on raw effluent from the plant, immediately after carbonation, and one-quarter mile down river. A high pH after carbonation will result in increased flue gas flow. This control will also be activated by increased volume of effluent from the plant; also waste flow recorder, temperature indicators for flue gas, and continuous CO₂ analyzer.

A system very similar to the one just described should be in operation at our Spartanburg plant late this Summer or early Fall. Being a new concept, and due to the fact that our pilot plant operations were limited in order to make quick improvement of our waste, some modifications will probably have to be made after full-scale operation is begun. In fact, we plan to put the plant into operation step-by-step and make needed changes as dictated by performance. We hope some of the thoughts presented here will, when put into practice, make industry a still better citizen.

Flameproofing Compounds—The Health Angle

In order to comply with a federal law passed last year which prohibits interstate commerce of highly-flammable wearing apparel and fabrics, many manufacturers are now impregnating various textiles with fire retardants that are in turn proving a hazard to workers handling them, according to Irving Ettinger and Martin Jeremias, chemical engineers of the Division of Industrial Hygiene, New York State Department of Labor. The result of their extensive research was disclosed in a paper read before the American Conference of Governmental Industrial Hygienists at the Industrial Health Conference in session at Buffalo, N. Y.

"Among the fabrics requiring flameproofing treatment," the paper stated, "sheer nylon nettings assumed an unusual importance due to the sudden increase in the use of these fabrics for party dresses, veils and petticoats. A survey of the mills in the New York area showed that the main flameproofing agent for nylon fabrics was urea-formaldehyde. Some formulations included melamine-formaldehyde and a sulfur compound." Investigation disclosed, the researchers say, that the proper impregnating process was not followed in any of the mills. No attempt was made to squeeze out the excess unpolymerized resin which breaks down to irritating formaldehyde gas. "In fact," they point out, "the fabric is loaded with as much resin as possible to lend it greater stiffness in order to give the petticoats the bouffant effect required by present styles. Generally, the net is rolled and shipped without benefit of afterwash or other treatment. During storage some of the uncured resins turn into formaldehyde gas and the workers, unrolling the cloth, become exposed to the gas causing them eye, nose and throat irritation. In addition, the fabric itself is so loaded with the resin that during handling flaking occurs, the flakes entering the worker's eyes causing irritation aggravated by hand rubbing. These flakes have to be removed by a physician."

For several reasons the mill owners objected to the removal of unpolymerized resin, the two chemical engineers explained. The reasons were that the added cost could not be absorbed, that nylon could not stand the added handling, that the mills do not have the necessary equipment and are reluctant to invest in it and, finally, that the removal of the surface resins would reduce the stiffness of the net. These objections had to be conceded and the more basic approach, the improvement of the raw material used in flameproofing, was sought.

PERSONAL NEWS



William B. Floyd

William B. Floyd, sales representative for the Uster Corp., Charlotte, N. C., has been promoted to testing equipment manager. In his new post Mr. Floyd will supervise the sales, installation and service of all Uster textile testing equipment. Prior to joining the company in 1952, he was with the research division of the Air Transport Command and in private business.

James L. Eskridge has been elected a vice-president of Burlington Mills, the man-made fiber fabrication unit of Burlington Industries. With Burlington since 1946 except for a period from 1951-53 when he was associated with Stonecutter Mills Corp., Spindale, N. C., Mr. Eskridge has broad general responsibility for Burlington's filament weaving operations, including commission throwing and tricot knitting. Prior to 1946 when he joined Burlington, Mr. Eskridge was associated with several textile manufacturing concerns in the Carolinas and Virginia, rising to the post of superintendent of the Celanese Corp. of America plant at Staunton, Va., in 1945. After joining Burlington, he filled a number of manufacturing assignments at various plant locations, being named as executive assistant on the general manager's staff in 1947, and later as development co-ordinator. He left Burlington in 1951 to take a post as assistant to the president of Stonecutter Mills Corp., and upon returning to Burlington in 1953 he was named division manager of filament Draper weaving operations.



H. W. Whitcomb

Harold W. Whitcomb, president and a director of Fieldcrest Mills Inc., Spray, N. C., has been chosen the "Man of the Year" by the North Carolina State College Eta Chapter of Phi Psi, the national textile fraternity. Mr. Whitcomb will be honored at the annual Phi Psi banquet to be held in Raleigh, N. C., May 6 when he will formally receive the award. Born in Concord, N. H., Mr. Whitcomb was graduated from the University of New Hampshire with a B.S. degree in economics and business administration. He was associated with Sulloway Hosiery Mills, Franklin, N.

H., in various capacities before joining Marshall Field & Co. in 1936 as manager of the Lumb Knitting Co., Pawtucket, R. I. He moved in 1937 to the Spray, N. C., headquarters of the manufacturing division of Marshall Field. He was elected divisional vice-president in 1946, and on Oct. 1, 1953, upon sale of the mills by Marshall Field, was elected vice-president of Fieldcrest Mills Inc. On Dec. 1, 1953, he became president and was elected to the board of directors. Mr. Whitcomb is a director of the American Cotton Manufacturers Institute and chairman of the A.C.M.I. education committee; a director of the North Carolina Textile Manufacturers Association; and a trustee of the Institute of Textile Technology, Charlottesville, Va. He was named "Man of the Year" for 1954 by the Leaksville-Spray Exchange Club.



R. Michael Turner

R. Michael Turner of Clinton, S. C., has been named South Carolina sales representative for The Marquette Metal Products Co., Cleveland, Ohio. Mr. Turner, who will make his headquarters in Clinton, is well-known in the state, having previously sold aluminum adapters for converting spindles to paper tubes. C. H. White, Charlotte, N. C., will continue to represent Marquette in North Carolina and Virginia. Fred E. Harrell, general manager of Marquette, has been named president of the company, succeeding Herbert Gleitz, who retired April 1 after 35 years with the firm he founded in 1920. Mr. Harrell recently resigned as vice-president and director of Reliance Electric & Engineering Co., Cleveland, after 30 years with the firm, during which time he served successively in sales, engineering and manufacturing.

Three appointments in the textile resins department have been announced by the organic chemicals division of American Cyanamid Co. Alexander L. Logan has been named group leader of sales application; William N. Nakajima, group leader of development; and George Switlyk, group leader of the testing section. Mr. Logan joined Cyanamid in 1942 as a chemist in the coal tar distillation department and in 1946 went with the azo dyestuff and intermediates development section. Three years later he was made a development chemist in the textile resins department, a position he held until his appointment. Mr. Nakajima came

to Cyanamid in 1946 as a development chemist in the textile resins application laboratory, a position he held until his present promotion. Prior to his association with American Cyanamid, he was with the American Finishing Co., Memphis, Tenn. Mr. Switlyk came to Cyanamid in 1950 as a chemist and a year later was made a control laboratory leader. In 1953 he joined the textile resins laboratory.



Allan L. Burton

Allan L. Burton has been appointed research director of Veeder-Root Inc., manufacturer of counters and computing instruments. Market and product research will be combined under Mr. Burton's direction to give added emphasis to the function at Veeder-Root. Mr. Burton joined Veeder-Root a year ago, following specialized work in new product administration at the Radio Corp. of America. Prior to that, he was manager of industrial sales of Tracerlab Inc.; and worked on new business research and development with the American Optical Co. During World War II, he carried out research work with the Underwater Sound Laboratories at Harvard University. He is an electronics engineer and received his master's degree in physics at the University of Buffalo. A native of Buffalo, he now resides in Putnam, Conn.

E. Kent Swift Jr., director of research, Whitin Machine Works, Whitinsville, Mass., has been elected to the company's board of directors. He is the son of E. Kent Swift, chairman of the board, and a direct descendant of John C. Whitin, who established the firm in 1831.



Robert E. Amidon

Robert E. Amidon has been named sales representative by the Graton & Knight Co., Worcester, Mass., for Virginia and West Virginia. Mr. Amidon, formerly with Heald Machine Co., Worcester, will make his headquarters in Pittsburgh, Pa., selling the company's line of leather belting, textile leathers and other leather specialties.

Vincent T. Dunning has been elected vice-president of L. F. Dommerich & Co.

PERSONAL NEWS

Inc. Mr. Dunning has been with Dommerich since October 1950, serving in the credit department and later in the new business section. Prior to joining Dommerich, he was in the credit department of Textile Banking Co. Inc. for 19 years.

Crompton & Knowles Loom Works, Worcester, Mass., elected an executive committee and a development committee at its recent annual meeting. Elected to the executive committee were Frederic W. Howe Jr., the firm's president and general manager; Rufus S. Frost, Albert Palmer, Oscar V. Payne and Harold R. Wing. Those appointed to the

development committee were Messrs. Howe, Palmer, Wing, Payne and Richard G. Turner. In addition to Mr. Howe, all officers and directors of the company were re-elected.

A. S. Dempewolff has been named assistant to the general manager of the textile division of Celanese Corp. of America. In his new capacity, Mr. Dempewolff will undertake studies and special projects and will assist the general manager in administration. Mr. Dempewolff joined Celanese in 1940 in the New York office as assistant advertising manager. He was later made advertising and sales promotion manager and was appointed manager of the market development department of the textile division in

May 1952, which assignment he held at the time of his new appointment. George W. Ewald has been named manager of the newly-created industrial sales department in the textile division. The new department replaces the market development department. Mr. Ewald, formerly with the corporation's central development department, will make his headquarters in Charlotte, N. C. . . . L. P. Wenzell has been transferred from the old development department to the new position of manager of special industrial developments in the market development department. Before joining Celanese in 1953, Mr. Wenzell had been with the U. S. Bureau of Mines, Kolker Chemical Works and Monsanto Chemical Co.

John M. Snoddy, superintendent of Mills Mill, Greenville, S. C., a subsidiary of Reeves Bros. Inc., New York City, has been elected president of the Greenville Textile Club. He succeeds C. J. Pride, manager of the Dunean Mills Div. of J. P. Stevens & Co. Inc. Odie E. Little, superintendent of the Victor-Monaghan Co. Div. of Stevens, was elected vice-president and D. W. Stevenson, Parker High School, was re-elected secretary-treasurer.

Ralph Wechsler, treasurer of Nopco Chemical Co., Harrison, N. J., has been elected president of the company, succeeding Thomas A. Printon. Mr. Printon, president since 1949, will continue to serve as chairman of the board. Mr. Wechsler has been connected with the firm since 1921. He was elected to the board in 1927 and in 1932 became treasurer. He will also act as chief officer of Metasap Chemical Co., a wholly-owned subsidiary.

Vice Admiral Harold G. Bowen (U. S. Navy, Retired) has been named president and treasurer of the U. S. Ring Traveler Co., Providence, R. I. Adm. Bowen spent almost 46 years in the Navy, and for the past seven years has been executive director of the Thomas A. Edison Foundation, West Orange, N. J.

Arthur J. Weber, personnel manager of American Thread Co., Clover, S. C., has accepted a position with Kingston Mills Inc., Cartersville, Ga. Mr. Weber, who had been at American Thread since 1949, will be succeeded by Bryan Gibson, assistant personnel manager of American's Sevier, N. C. finishing plant. Mr. Gibson, a graduate of the University of North Carolina, was formerly personnel manager of Marion (N.C.) Mfg. Co.

Edmund Wellington Jr. has been appointed assistant to the executive director of the National Federation of Textiles. Mr. Wellington recently returned to this country from Hanoi, Vietnam, where he was vice-consul for the State Department. He is a native of Florida and a graduate of the University of Florida.

The appointment of Otto F. Long as assistant to the nylon district sales manager at Charlotte, N. C., has been announced by Du Pont's textile fibers department. The appointment is effective April 1. Mr. Long has been associated with rayon sales in the Charlotte office for all but three of the past 27 years. Since 1943 he has devoted

Schenck Firm Named McKiernan-Terry Agent

The textile division of McKiernan-Terry Corp. has announced the appointment of the organization of John R. Schenck and Alexander F. Schenck as its representative



John R. Schenck



A. F. Schenck

with headquarters at 812 Johnston Bldg., Charlotte, N. C., and covering the states of Virginia, West Virginia, Tennessee, North Carolina, South Carolina, Georgia, Alabama and Florida. The Messrs. Schenck have had extensive experience in textile manufacturing and machinery sales. As McKiernan-Terry representatives, they will handle the sales of the company's textile machinery, auxiliary equipment, repair parts, and new and rebuilt rolls for textile mills.

John R. Schenck, one of the partners in the organization, was trained in textile engineering at Clemson College and was graduated from Davidson College. For several years after his graduation he was associated with the textile spinning, weaving and finishing concern of Highland Park Mfg. Co., and subsequently was superintendent of North Carolina Finishing Co., Salisbury, N. C. and Clearwater (S.C.) Finishing Co. In 1937 he entered the textile finishing machinery business in Charlotte, and during World War II he served in the experimental division of the Air Corps with the rank of major. For the past ten years, Mr. Schenck has been Southern manager for Proctor & Schwartz Inc., of Philadelphia, with offices in Charlotte, and he will continue as a consultant for this company.

Alexander F. Schenck was graduated from Davidson College and the Harvard Graduate School of Business Administration in industrial management, and during World War II he served in the Mediterranean as an infantry lieutenant-colonel. Since 1946 Mr. Schenck has been active in the textile finishing machinery field as Sou-

thern sales agent for several textile machinery firms which the new organization will continue to represent.

Proctor & Schwartz Plans Increased Sales Facilities



Harold G. Black

Proctor and Schwartz Inc., has announced that effective May 1, 1955, it will increase sales facilities at Spartanburg, S. C. All equipment sales in the Southern states will be handled through the office in Spartanburg, under the direction of Har-

old G. Black. Thomas A. Mahan has been assigned to the Spartanburg office and Joseph P. Christ will continue in his present



Thomas A. Mahan



Joseph P. Christ

position. John R. Schenck of Charlotte, N. C., who has represented Proctor in the South for the past ten years, will now conduct his own business in addition to serving Proctor & Schwartz as a sales consultant. Mr. Black has been associated with Proctor & Schwartz for the past 35 years and is well known in the industry. He started in the research laboratory, became head of the department, and then moved on to sales service. He advanced to the sales department of the shop. Following Army service in World War II, he worked in the planning room, the shop office, scheduling department, textile engineering and moved into the sales department in 1950. He was transferred to the Spartanburg sales office in 1952. Mr. Mahan joined Proctor & Schwartz in 1946, working in the engineering department for two years. He was transferred to sales work in 1948 and worked out of the Charlotte office for about three years. He has been handling sales of textile drying equipment from the Philadelphia office since 1951.

his efforts exclusively to the sale of rayon staple. In his new position, he will continue to call on staple fiber customers but in the role of developing sales for nylon staple. He has been with Du Pont since 1935.

Dr. Joseph W. Lang has been named manager of manufacturing for the dyestuff and chemical division of General Aniline & Film Corp. Dr. Lang, who has been director of research for the division, will be succeeded in the latter post by Dr. Melvin R. Stevinson, currently process development manager. Dr. Lang, who succeeds Dr. William L. Walsh who recently resigned, joined General Aniline in 1943 after doing research and chemical engineering work for Du Pont. Dr. Stevinson has been with General Aniline since 1935.

Ivan Y. T. Feng has been appointed senior market research analyst in the market research department of American Cyanamid Co. Mr. Feng, who joined Cyanamid in 1954, has 13 years' experience in the fiber field. He has served as textile consultant for the Puerto Rican government and with Celanese Services. Mr. Feng holds an A. B. degree from the University of California, an M.B.A. from Stanford University and an M. S. degree from North Carolina State.

Frank Anderson has been named technical sales representative in Virginia and North Carolina for the Warwick Chemical Division of Sun Chemical Corp. He was previously assigned to the company's New England territory. Prior to his association with Sun in 1953, he was with Grinnell Co. in Providence, R. I., for six years. He will make his headquarters in Greensboro, N. C.

Sonoco Products Co., Hartville, S. C., has announced the following recent transfers: Dan Watford of the main office has been named sales manager of the Los Angeles, Cal., division. He will relieve Judge DuBose who has been on temporary assignment in California, and Mr. DuBose will return to Hartsville. . . . Dick Peacock, sales representative in the states of Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Texas and Western Florida, has been transferred to the North Carolina territory where he will succeed Walter Lewis. Mr. Lewis is being transferred to the Hartsville main office. Bert Griffin, who transferred recently to sales from the standards department, will take over Mr. Peacock's former territory. Mr. Peacock will make his North Carolina headquarters in Charlotte.

Henry H. Meyer has joined Indian Head Mills Inc. as controller of the company's Pequot Division. Mr. Meyer, who will make his headquarters in New York City, was formerly assistant controller of Alexander Smith Inc. Prior to that he had been associated with Burlington Mills Corp. and Textron Inc.

Frank A. Spake has been promoted from doffer to second hand of spinning, Plant No. 1, Abney Mills, Anderson, S. C.

C. M. Burgess, secretary and assistant treasurer of Laurens (S. C.) Mills, has retired after 48 years with the firm. Mr. Burgess was the honor guest at a recent testimonial dinner given in his behalf at the

C HAMBRAY

LAWN

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C HINTZ



STANDARDIZED STARCHES

FOR THE SIZING
AND FINISHING OF
TEXTILES

**CLINTON FOODS
INC**

Corn Processing Division

CLINTON, IOWA

Technical Service in connection
with your specific problems is
available upon request.

PERSONAL NEWS

Mary Musgrove Hotel in Clinton, S. C. He was presented with a gold watch by fellow officers and associates.

David Arthur, Southern manager of manufacturing for the Craft Fabric Division of Pacific Mills, has been named general manager, a newly-created position. In his new post, Mr. Arthur will have responsibility for the following Pacific woolen and worsted plants: Lawrence, Mass.; Carrboro, N. C.; Halifax, Va.; Drakes Branch, Va.; and Brookneal, Va. He will continue to make his headquarters at the Halifax plant.



David L. Friday

David L. Friday has been appointed Southern sales manager for Kidde Mfg. Co., Bloomfield, N. J. Mr. Friday, who recently resigned as vice-president, secretary and director of Cocker Machine & Foundry Co., Gastonia, N. C., will head Kidde's new Southern office and sales shop planned for Gastonia, N. C. . . . Otto Biegel, who has been representing Kidde in the South, will also make his headquarters at Gastonia.

Charles W. Carvin Jr. has joined The Chemstrand Corp. in a selling capacity and has been assigned to the Acrilan sales division. He will specialize in the broad woven goods field. Before joining Chemstrand, he was vice-president in charge of merchandising and selling for Charles W. Carvin Co., Inc. Previously, he had been president of Borvin Co., New York City converters, and before that a partner in United Fabrics Co., a Chicago converting firm. He will be located in the general sales office of The Chemstrand Corp. at 350 Fifth Avenue, New York 1, N. Y.

The Dobeckmun Co., Cleveland, Ohio, announces the appointment of John W. Miller to the position of assistant Southern divisional sales manager. Mr. Miller will have headquarters in Atlanta, Ga., joining Paul Bennett, Southern divisional sales manager. Mr. Miller will represent both the packaging and industrial divisions, selling plain and printed polyethylene and cellophane bags and roll stock, and industrial packaging laminations, laminated cover and box papers, electrical insulating tapes and film-laminations, and the many custom laminations of the company.

J. C. Whitehurst has been appointed special sales engineer for the W. D. Dodenhoff Co., Greenville, S. C. Mr. Whitehurst was formerly a sales engineer with the Medley Mfg. Co., Columbus, Ga., and prior to that for the Hartford Machine Screw Co. He will make his headquarters in Greenville.

Charlie R. Moore has been named night superintendent of Borden Mfg. Co., Goldsboro, N. C. Mr. Moore was formerly night superintendent of The Smitherman Cotton Mills, Troy, N. C.

Nathaniel M. Mitchell, president of Barnes Textile Associates Inc., Boston,

Mass., has assumed the responsibilities of treasurer following the resignation of H. R. Plummer. Mr. Plummer, who was also executive vice-president in charge of cost operations, retired after 27 years service due to ill health. A successor to Mr. Plummer's vice-presidency has not been announced.

Bryan Whitmire has been named South Carolina sales representative for Sykes Inc. Mr. Whitmire, who will make his headquarters in Greenville, was formerly a sales representative for Hunt Machine Works, Greenville. Prior to that he was associated with The Springs Cotton Mills, Gayle Plant, Chester, S. C. He is a graduate of Clemson College.

Hugh C. Land has been named to succeed William P. Drake as head of the industrial chemicals division of the Pennsylvania Salt Mfg. Co. Mr. Drake was recently named executive vice-president when President George B. Beitzel announced plans to retire later this year upon completion of 25 years service with the company. As general manager, Mr. Land will direct both production and sales activities of the division. He has been with Pennsalt since 1946.

Dr. Frank J. Soday, vice-president and director of research and development for The Chemstrand Corp., Decatur, Ala., and president of the Southern Association of Science and Industry, has been named the 1955 Herty Metal Winner for his outstanding contribution to the field of chemistry in the South. The purpose of the award, which is given by the Chemistry Club of Georgia State College for Women and awarded by the Georgia American Chemical Society section, is to give public recognition to the work and service of outstanding chemists who have contributed to their chosen field. The award is named after Dr. Charles H. Herty who pioneered the development of the paper industry in the Georgia area.

William H. Ruffin, president of Erwin Mills Inc., Durham, N. C., and Dr. Robert T. Armstrong, Celanese Research Corp., Charlotte, N. C., were recently named by North Carolina Governor Luther Hodges to a seven-member committee which will investigate a proposal to develop an industrial research center in the Durham, N. C., area.

Paul S. Monty and W. A. Norman have joined the technical sales service division of The Chemstrand Corp. Mr. Monty comes to Chemstrand from Gayley Mill Corp., Marietta, S. C., where he was foreman of finishing. Previously he had been sales representative for Will Corp. of Georgia, Greenville, S. C., and for Charles B. McLin, Charlotte, N. C. Mr. Norman has been with Chemstrand since 1953 as equipment development engineer at Chemstrand's nylon plant in Pensacola, Fla. Both Mr. Monty and Mr. Norman will be located in the Decatur, Ala., headquarters of the company.

Albert G. Ruff Jr., has been promoted to the position of assistant manufacturing superintendent at the Nitro, W. Va., rayon plant of the American Viscose Corp. Mr. Ruff joined Avisco in 1941 as a chemical engineer at the Roanoke, Va., plant. A short time later, he was appointed technical as-

sistant to the spinning department head and was promoted to the position of spinning department head in 1943. Mr. Ruff has also held the position of assistant to the personnel manager, and in 1954 was appointed staff assistant to the plant manager.

Bernard K. Easton has been appointed manager of the textile research and development department of Becco Chemical Division, Food Machinery & Chemical Corp. Mr. Easton, who joined Becco in 1947 as a research chemist, will be in full charge of research and development group concerned with textile wet processing.

Edward S. Rudnick, director of research for Wamsutta Mills, New Bedford, Mass., has resigned his position. Mr. Rudnick, who had held the post since 1949, also directed the company's quality and waste control programs. He was a founder of the textile division of the American Society for Quality Control and is currently national vice-chairman.

E. W. Medberry of Spray, N. C., vice-president of Fieldcrest Mills Inc., has been elected to the National Council, Boy Scouts of America, as a representative of Cherokee Council which serves Rockingham, Caswell, Person and Alamance counties in North Carolina.

Mrs. Nancy Burke Leahey has been named president, and her husband, Garret, executive vice-president of Barber Mfg. Co., Lowell, Mass. Mrs. G. E. Burke, Lowell, was president before her death in December. She was the mother of Mrs. Leahey. Robert T. Dixon continues as treasurer and plant manager at Charlotte, N. C.

Dr. Gerald Laxer has been named to head the science and technology program of The Wool Bureau Inc. to succeed Giles E. Hopkins, who has resigned. Dr. Laxer, formerly research and development chemist for Alexander Smith Inc., Yonkers, N. Y., recently completed three years of research in the department of textile industries at Leeds University. He is the recipient of the 1951 Wool Bureau Fellowship for study at Leeds where, early this year, he received a Ph.D. In his new post as technical director, Dr. Laxer will initiate and co-ordinate research activities conducted by the bureau, direct the dissemination of world-wide research findings on wool and work with industry groups in the application of technological advances to modern wool processing.

Tom R. Johnson has been named foreman of the weave room at the Eva Jane Plant of Avondale Mills, Sylacauga, Ala. At the time of his promotion, he was weave room instructor. He has been with Avondale about two years.

J. R. Copland Jr. has been elected president and treasurer of Copland Fabrics Inc. and Copland-Fowler Industries Inc., Burlington, N. C., succeeding his father, who died recently in Durham, N. C. Directors of Copland Converting & Finishing Co., also in Burlington, are expected to meet soon and also name Mr. Copland president. Other officers in the plants remain as before.

Jim Houston, production manager of Mooresville (N. C.) Mills Inc., has been

ected president and a director of the Mooresville Rotary Club.

Charles E. Daniel, chairman of Daniel Construction Co., Greenville, S. C., and director of several textile firms, was recently awarded the Sertoma Club's Freedom Award for having "demonstrated most successfully the American way of life." Mr. Daniel was presented the award at a dinner meeting of the club in Greenville.

G. G. Simmons, general manager of Drayton Mills, Spartanburg, S. C., has been elected vice-president of the Spartanburg Chamber of Commerce.

Arthur W. Kincaid, president of Ideal Machine Shops, Bessemer City, N. C., is seeking re-election as Ward 3 school trustee in Kings Mountain, N. C. Now in his eighth year on the school board, Mr. Kincaid is completing his first full term of six years after filling an unexpired term. He is currently chairman of the school board.

Roy Stead, superintendent of finishing, Mt. Hope Finishing Co. Inc., Butner, N. C., has been named resident manager of the company's new plant being set up at Henderson, N. C. Succeeding Mr. Stead at Butner is Keith Thurman of the Butner staff, who formerly was connected with Erwin Mills Inc., Durham, N. C. Operations of both the Butner and Henderson plants will be directed by George Staples, vice-president.

Wendell W. Bowen has been promoted to assistant superintendent of rayon finishing at Riegel Textile Corp., Ware Shoals, S. C. As assistant to Stewart Thompson, he will have charge of all rayon finishing operations.

H. B. Clyburn Jr. has been named night superintendent of Corriher Mills Co. and Linn Mills Co., both at Landis, N. C. Mr. Clyburn was formerly with Mooresville (N. C.) Mills Inc.

John M. Henry has resigned as assistant manager of Hyde Park Mills Inc., Covington, Tenn., to accept a position as plant manager with Coosa Yarn Mills Inc., Attalla, Ala. Prior to joining Hyde Park in 1952, Mr. Henry had been associated with Dan River Mills and Burlington Mills.

Roy E. Butler, assistant treasurer of Standard-Coosa-Thatcher Co., Chattanooga, Tenn., has retired after almost 38 years continuous service with the company. He joined the old Standard Processing Co. in 1917 as a shipping clerk and was soon promoted to the position of bookkeeper. Shortly after the three original units of the company were consolidated as Standard-Coosa-Thatcher, Mr. Butler was made chief accountant for the entire company. He was made assistant treasurer in November 1952.

W. B. Holt has been named spinning overseer at the Pinkney Plant of Textiles Inc., Gastonia, N. C. Mr. Holt was formerly with the U. S. Rubber Co., Gastonia.

Miss Elizabeth Allen, receptionist and switchboard operator at Dan River Mills Inc., Danville, Va., has retired and was recently given a testimonial dinner in tribute to her many years service. Known gen-

erally as "Miss Lizzie," she had an unusual ability to remember names and faces, often surprising seldom-seen business callers who served Dan River's main office. She was presented with a number of gifts at the testimonial dinner.

James A. Connell, head of the Southern office of the Crescent Corp. at Spartanburg, S. C., has been elected a vice-president of the company. Mr. Connell, who has been with Crescent since 1936, will continue his present duties in his new post.

Hugh Chatham, president of Chatham Mfg. Co., Elkin, N. C., has announced the following personnel changes . . . R. G. Boles, formerly head of spinning, carding and picking departments, has been named mill superintendent, B shift . . . H. H. Barker, superintendent of manufacturing, has been named mill superintendent of the C shift . . . R. H. Lankford Jr. has taken over as superintendent in charge of production control . . . Eugene Powers has been named supervisor of cards and ring spinning . . . Jack Terrell is now general foreman of ring spinning on all shifts . . . B. W. Carter has been given general supervision of mule spinning and rewinding . . . Fred Page will supervise the picking department as it has been made a part of the wool room supervised by Mr. Page . . . J. A. Murphy, who has been working for Chatham on a part-time basis, has been named to succeed Mr. Barker as superintendent of manufacturing . . . E. J. Freeland remains as department head over Burling No. 1, and Burling No. 2 has been placed under the supervision of Irl Shamel, head of the napping department.

OBITUARIES

Clarence Jackson Ashmore, 64, former superintendent of the Pomona Cotton Mills, Greensboro, N. C., and later superintendent of the Lane Cotton Mills, New Orleans, La., died April 1 in Greensboro, N. C. At the time of his death, Mr. Ashmore was vice-president and general manager of Gunter-Ashmore Co., Concord, N. C., manufacturer of plastic materials. Surviving are his widow, his mother, four brothers and three sisters.

Robert Brenton Bailey, 36, U. S. Department of Agriculture cotton technologist at Clemson College, died April 4. Mr. Bailey was a graduate of Clemson. Survivors include his widow, his mother, a son, a brother and five sisters.

James R. Copland, 80, president of Copland Fabrics Inc., Copland Converting & Finishing Co. and Copland-Fowler Inc., Burlington, N. C., died recently in Durham, N. C. Before organizing Copland Fabrics in 1941, Mr. Copland had been associated with Burlington Mills, E. M. Holt Plaid Mills and Virginia Mills Inc. A son, James R. Jr., survives, and has been named to succeed his father as president of Copland Fabrics and Copland Converting & Finishing. He is expected to be named president of Copland-Fowler following an early meeting of that firm's board of directors.

Randolph Crompton, 80, retired textile machinery executive, died March 29 at

Boston, Mass. Mr. Crompton consolidated the former Crompton & Furbush Co. with Knowles Loom Works in 1897 to form Crompton & Knowles Loom Works, Worcester, Mass. His interest in the firm was purchased in 1900, and in 1904 he started Crompton-Thayer Loom Co. which Mr. Knowles bought out in 1907. Mr. Crompton later joined Hopedale Mfg. Co. which he consolidated with Draper Corp. in 1928. He then retired. A sister survives.

William B. Ferguson, 44, assistant export sales manager of the American Viscose Corp., New York City, died March 21 at Englewood, N. J. Mr. Ferguson was a graduate of North Carolina State College. He is survived by his widow and his father.

Col. J. W. Harrelson, 69, chancellor emeritus of North Carolina State College, died recently at Raleigh. Colonel Harrelson retired as chancellor of the college in September 1953 after 19 years as administrative head of the school. His widow survives.

Edwin P. Johnstone Jr., 49, technical manager of the research laboratory of the American Association of Textile Chemists & Colorists, Lowell, Mass., died April 9 at Lowell. Mr. Johnstone had been a chemist with American Cyanamid Co., Stamford, Conn., before joining the A.A.T.C.C. nine years ago. Survivors include his widow and three sons.

James R. Redmond, 40, vice-president of the textile colors division of Interchemical Corp., Pawtucket, R. I., died April 6 at Pawtucket. Prior to joining Interchemical in 1945 as a sales representative, Mr. Redmond had been with Ciba Co. He is survived by his widow, his mother, a son, a daughter and a sister.

John W. Ridenhour, 71, owner and operator of J. W. Ridenhour Textile Machinery Co., Charlotte, N. C., died recently at Charlotte. Mr. Ridenhour, whose son, Arthur A. Ridenhour, operator of Arthur A. Ridenhour Textile Machinery & Supplies, died Feb. 27, had been associated with the textile machinery business for 50 years. Another son, Hoyte A. Ridenhour, Hoyte A. Ridenhour Machinery & Supply Co., Charlotte, survives. Other survivors include his widow, three daughters and a brother.

Abraham Schottland, 90, founder of A. Schottland Inc., Rocky Mount, N. C., died recently in Orlando, Fla., where he had lived since his retirement eight years ago. Mr. Schottland founded A. Schottland Inc. in 1903 at Paterson, N. J. The mill at Rocky Mount, now headquarters for the firm, was established in the 1920s. Surviving Mr. Schottland are a son, three grandchildren and three great-grandchildren.

Charles J. Shannon, 59, vice-president and director of Robert & Co. Associates, Atlanta, Ga., died April 3 at Atlanta. Mr. Shannon, a Clemson College graduate, had been associated with Robert & Co. since 1922. He was made vice-president and director in 1945. Survivors include his widow, two daughters, a sister and a brother.

HICKORY, N. C.—Construction has started on a new brick building here for Shuford Mills Inc. The structure will adjoin the present main office of the company and be occupied by the plastics department of Shuford Mills, now being housed in the Highland Cordage Co. building. It will also be used for warehouse purposes. Of one-story construction with basement, the plant will contain some 78,000 square feet of floor space.

HENDERSON, N. C.—Mount Hope Finishing Co. Inc. of Butner, N. C., has purchased a building here, on which it took an option some time ago, and will use the structure to expand its business. The building contains some 138,000 square feet of space and will be used in the dyeing and finishing of synthetic fabrics. The plant is expected to be in operation some time this Summer or early Fall. When in full operation, it will employ about 200 persons.

ASHEVILLE, N. C.—The Asheville Fabric Corp. plant has been sold by Cone Mills Corp., Greensboro, N. C., to William B. Dillard, Sylva, N. C., contractor. Tax stamps on the deed indicated the purchase price was approximately \$190,000. The mill has been closed several years. Reports state that Mr. Dillard plans to subdivide the mill facilities for leasing to small industries.

CLINTON, S. C.—Stockholders of Clinton Cotton Mills and Lydia Cotton Mills, here, have approved proposals for increasing capitalization of both plants. The proposals were to increase Clinton's capitalization to \$2,010,000 and Lydia's to \$1,600,000. P. S. Bailey, president of both firms, said the actions would amount to stock dividend and split.

MAGNOLIA, Ark.—Magnolia Cotton Mill, a division of N. & W. Industries Inc., Lynchburg, Va., has closed and arrangements have been made for the liquidation of machinery and equipment. The mill, which employed 300 persons and had an

annual payroll of more than \$600,000, reportedly closed because of financial losses in the past three years. Watson & Desmond, Charlotte, N. C., will handle the liquidation with the exception of the real estate.

GASTONIA, N. C.—To celebrate 20 years in Gastonia, Firestone Textiles Inc., a division of Firestone Tire & Rubber Co., will hold open house here May 3-7. Theme of the open house is "20 Years of Progress." On the evening of May 5, 100 Firestone employees with 20 years' longevity will be feted at a banquet and given watches and service pins. Firestone bought the Gastonia plant from the Manville-Jenckes Co. April 1, 1935.

ROCKINGHAM, N. C.—Aleo Mfg. Co. is planning a modernization program to cost more than \$500,000. Now in the formative stage, plans call for new card room and spinning room machinery and additional drawing equipment. The plans also include the purchase of frame cleaning equipment and an air-change system for the spinning room. A spokesman for the company said the expansion will be a move toward larger packages.

LOCKHART, S. C.—The Lockhart Plant of Monarch Mills, Union, S. C., is installing 126 new looms and will add a number of spindles to its present productive capacity. An official of the firm said that more than a million dollars will be spent in the mill in the next year on new equipment.

REIDSVILLE, N. C.—Southeastern Industries Inc. has been established here and will garnett and process synthetic fibers. Joseph Rumsey is president of the new firm and L. S. Niegelsky is vice-president and treasurer. Both were formerly with Beaunit Mills Inc. The firm is expected to begin production in May.

DILLON, S. C.—A steam plant and an addition to the existing manufacturing facilities of Dixiana Mills Inc. are under construction here. The addition to the manu-

facturing end will be of 35,000 square feet of floor space to facilitate finishing operations. The steam plant, located north of the original plant, will have 32,000 pounds per hour capacity, which will double the capacity when added to the original steam plant. The additions are expected to be completed and in use about July 1. Dixiana, which went into operation last September, is a subsidiary of Mohawk Carpet Mills Inc. of Amsterdam, N. Y.

OXFORD, N. C.—A low bid of \$63,000 has been submitted for erection of a 10,000-square-foot plant to be built here for Oxford Fabrics Corp. Owner of the building will be Oxford Future Industries. Frank B. Simpson, Raleigh, N. C., is architect.

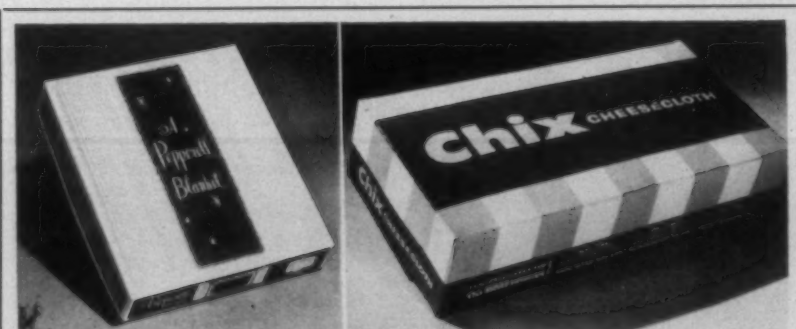
CALHOUN, GA.—Forrest Mills Inc., tufted carpeting manufacturer here, is adding between 10,000 and 20,000 square feet of floor space to its plant to accommodate two new tufting machines and more dyeing and finishing equipment. The expansion will more than double the firm's present capacity.

BUTNER, N. C.—The new plant of Athol Mfg. Co., here, started pilot runs last month and is expected to go into production of vinyl-coated fabrics soon. Some 40 to 45 workers will be used when production gets under way, with additional workers planned eventually. The new plant has been set up in two buildings formerly used in connection with a World War II Army camp. The buildings have been completely renovated.

OPP, ALA.—Micolas Cotton Mills is completing its \$500,000 expansion program, which included additions to the main building and the installation of new machinery. On the west side of the weave room to the mill is the largest addition, measuring 106 x 380 feet; an 80 x 90 foot addition has been added to the card room on the east end; and the addition to the spooler room on the north side is 30 x 70 feet. The expansion will add approximately 54 cards, 42 deliveries of drawing, 528 slubber spindles, 10,800 spinning spindles and 228 looms. An additional 125 employees will be needed to operate the added machinery.

CORDOVA, ALA.—Indian Head Mills Inc. has announced that it has placed a contract with the Draper Corp. for 85 new X-2 60-inch looms to be delivered in June. The new looms will replace 152 Model E belt-driven looms presently operating in the Cordova plant and will take the capacity of the preparatory equipment now in operation.

CALHOUN, GA.—Collins & Aikman Corp. has purchased the Mayfair Chenille Co. Inc. here, to enlarge its production of tufted products. Mayfair, which has been making tufted carpet for Collins & Aikman for the past nine months on a commission basis, will retain its company name, but the plant will operate as a Collins & Aikman division. Collins & Aikman is reportedly looking for a site for a finishing plant in the South, but the company has not indicated where the site might be.



PACKAGING AWARDS IN 1955 CARTON COMPETITION sponsored by the Folding Paper Box Association of America were won with these textile displays. At left is a blanket carton made for Pepperell Mfg. Co. by Container Corp. of America. A transparent window on the side panel allows visibility of the blanket and permits correct color selection without removing blanket from the carton. At right is a box for Chicopee Mfg. Co. Chix cheesecloth made by Robertson Paper Box Co. Inc. The length of this box was kept at exactly 18 inches so that one or more folds of the product would determine the yardage required by the customer.

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T.R.I. Holds 25th Annual Meeting

Sydney M. Cone Jr., vice-president of Cone Mills Corp., Greensboro, N. C., was elected president of the Textile Research Institute, Princeton, N. J., at the group's recent 25th annual meeting in New York City. Mr. Cone, a vice president of the institute last year, succeeds Percy S. How Jr., president of American Thread Co. Inc. Norman C. Armitage, vice-president of Deering Milliken Research Corp., Pendleton, S. C., was elected vice-president and chairman of the executive committee. Paul C. Alford Jr., a staff member of T.R.I., was re-elected secretary, and Donald H. Powers, Warner-Hudnut Inc., was re-elected treasurer.

Dr. J. H. Dillon, director of T.R.I. and recent recipient of the Harold DeWitt Smith Memorial Medal (awarded March 17 at the Spring meeting of Committee D-13 on Textile Materials of the American Society for Testing Materials), was one of the featured speakers at the two-day meeting. Dr. Dillon, in a "Review of T.R.I. Research in 1954," told the meeting that the research productivity of the institute had increased by about 50 per cent in 1954. He analyzed the research program at the institute and described the work accomplished on cotton, wool and synthetic fibers. In concluding his review, he remarked that the institute hopes to include several other important fields in the future T.R.I. program.

Bertrand W. Hayward, chairman of the education committee at T.R.I., outlined a new educational program which will be directed toward closing the gap between a B.S. textile degree and the Ph.D. at Princeton awarded for work under the supervision of T.R.I. Plans are underway for the institute to award an M.S. degree. This will make possible even closer co-operation between T.R.I. and the textile colleges, Mr. Hayward pointed out, and provide the industry with more men who have the advantage of a textile education along with advanced scientific education. Mr. Hayward, who is president of the Philadelphia (Pa.) Textile Institute, urged that the textile industry act to make a new national study of textile education, pointing out that the industry would be greatly aided if a study were made of present-day textile educational opportunities. He praised the industry for its work for textile college education and research, but indicated better results could be obtained with slightly greater support from the industry and better publicizing to the general public.

In a luncheon address on the first day of the meeting, Hugh Comer, chairman of the board of Avondale Mills, Sylacauga, Ala., pointed out that the challenge of cotton has attracted the finest scientists in the world, and that these scientists are making progress in chemistry, agronomy and the industrial aspects of cotton production. Cotton must mechanize and costs must be reduced, he declared, and more use must be made of chemistry in cotton cultivation.

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Chemical properties of the starting polymer in producing synthetic fibers are the fundamental key to the useful properties of the final fabric, Arnold M. Sookne of Harris Research Laboratories, Washington, D. C., told the meeting in a discussion entitled "Chemical Structure and the Useful Properties of Textiles." Despite this relationship, he said, modification in finishing and requirements of the specific end-use make it possible to fit fibers into many uses not to be expected from the original material.

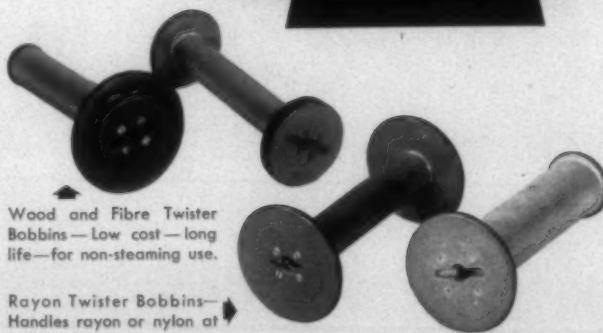
In a paper on "Mechanical Behavior of Fibers," Alexander Brown, research and development department, Carbide and Carbon Chemicals Co., South Charleston, W. Va., told the meeting that the mechanical behavior of fibers is studied to afford correlation with the properties of fabrics and with the structure of fiber-forming polymers. The studies are therefore an important part of basic research in textiles aimed at the drawing board design of fiber-forming polymers for textile applications. Stress-strain properties are an aspect of the mechanical behavior of fibers, he noted. Four points in the stress-strain curve can be correlated with fabric properties. These are the breaking point, "yield point," stiffness region and crimp region. High values at each of these points in the curve for a fiber should result in fabric exhibiting high strength and abrasion resistance, wrinkle resistance, good bulking and draping qualities and a good hand. Also, good processing characteristics in staple to yarn conversion will result. High values at these points will result if the fiber-forming polymer is capable of a moderately high degree of crystallinity, is oriented, has a high molecular weight and a high second-order transition temperature.

Patrick A. Florio, product research and development, Alexander Smith Inc., presented a paper on the "Control of Appearance Changes Due to Soiling," in which he pointed out that the problem of retarding the soiling rate of textile fabrics has only recently received serious attention from research groups. He went on to list various forms of fiber soilage, pointing out that quantity of soil retained by a fabric is not the important factor, but rather the effect of this retained soil on the appearance and color of the fabric. Describing carpet soiling, Mr. Florio told of the various tests his company had conducted in its attempt to solve the soiling problem, and listed the characteristics of treating materials developed by the company as soil resistance agents.

R. G. Stoll, Celanese Corp. of America, Summit, N. J., speaking on "Textiles with New Properties from Cellulose Triacetate," told the meeting that utilization of new dyeing and printing techniques appears possible on triacetate fabrics, owing to the stability of triacetate to high wet and dry temperatures. Such processes as high-pressure dyeing, pad dyeing and printing in combination with flash ageing, and non-aqueous high-temperature continuous dyeing will be of particular interest, Dr. Stoll said. It must be remembered, he pointed out, that the selection of the right dye-

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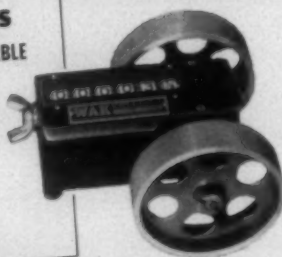


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stuffs from the commercially available ones is important. The formulation of dye recipes is somewhat different from those usually employed on acetate, he told the meeting.

In a stormy appraisal of the textile industry (see editorial), Harvard University Prof. Georges F. Doriot, former brigadier general in charge of research and development for the Quartermaster Corps during World War II, accused the industry of backwardness induced by inbreeding and old age. He said the industry has missed in sales, production and development and recommended the firing of some men, acceptance of new blood, a return to hard work, more knowledge about the factors leading to business success and a use of styling for the creation of new products. He said he was amazed to see so much interest in research at this time, but feared that some mills do it just to please stockholders. Today's textile industry, he noted, looks as though it is being compressed between the chemical industry on one side and the style and functional-minded public on the other. "Someday it will all be squeezed out by a modern industry that does not call itself textiles," he taunted.

Nine new trustees for the institute were elected at the meeting, including Bruce B. Allen, Celanese Corp. of America, Summit, N. J.; John P. Baum, J. P. Stevens & Co., Milledgeville, Ga.; W. E. Clark, U. S. Rubber Co.; Sydney M. Cone Jr., Cone Mills Corp., Greensboro, N. C.; Malcolm E. Campbell, School of Textiles, N. C. State College, Raleigh; Julius G. Forstmann, Forstmann Woolen Co., Passaic, N. J.; G. R. Holden, F. C. Huyck & Sons, Rensselaer, N. Y.; Walter Regnery, Joanna (S. C.) Cotton Mills Co.; and James L. Truslow, Saco-Lowell Shops, Boston, Mass.

Textile School Deans Touring Europe

Representatives of The National Council for Textile Education are currently on a several weeks tour of Europe. Details of the trip were made known by Bertrand W. Hayward, president of the group and president also of the Philadelphia (Pa.) Textile Institute. The group is visiting technological, educational and industrial centers in France, Switzerland, West Germany, Belgium and Great Britain. Consultations will be had with officials of textile educational institutions, research organizations, textile mills, textile machinery manufacturers and others. On the continent, highlights of the trip will be the conference of the Institut Textile de France, in Paris, and a meeting in Roubaix with French Textile School and manufacturing officials. While

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in Great Britain the National Council will hold a joint meeting with British textile school officials at Harrogate. The group will visit the Leicester College of Technology, Leeds University, the British Rayon Research Center, the Bradford College of Technology Textile School and the British Cotton Industry Research Association. They will visit, also, the International Wool Secretariat and Torridon (wool research center), and will be entertained by The Cotton Board. The group will end its trip in London attending the annual four-day meeting of the British Textile Institute.

The National Council is comprised of deans of the leading textile schools of the U. S. and others interested in the advancement of textile education. Its over-all objectives are to study and apply where possible improvements in textile and technological educational curricular, procedures and administration in order to supply the textile and allied industries with personnel better qualified to meet the needs of this important segment of the national economy. The European trip is designed to further advance these objectives by on-the-spot observation of work being done by similar groups of other countries. The trip was made possible through the co-operation of a number of companies in the textile and allied industries. Included in the group are Mr. Hayward; Cleveland L. Adams, director, School of Textile Technology, Alabama Polytechnic Institute, Auburn; Mrs. Mildred Andrews, executive secretary, American Textile Machinery Association, Vienna, Va.; Dr. Hugh M. Brown, dean, School of Textiles, Clemson, S. C.; Malcolm E. Campbell, dean, School of Textiles, N. C. State College, Raleigh; Leslie B. Coombs, president, Bradford Durfee Technical Institute, Fall River, Mass.; Julian Jacobs, editor, *Textile Research Journal*, Textile Research Institute, New York City; Dr. Martin J. Lydon, president, Lowell (Mass.) Technological Institute; and Edward T. Pickard, executive secretary, The Textile Foundation, Kent, Conn.

Collective Bargaining Conference Scheduled

To help industrial relations directors prepare for their 1955 labor-contract negotiations, the American Management Association will hold a special conference on collective bargaining at the Hotel Commodore, New York City, May 16-17. Seventeen speakers will discuss current issues in labor relations against the background of the A.F.L.-C.I.O. merger, the guaranteed annual wage demand and other developments on the labor-management front.

Attendance at the two-day national conference will be

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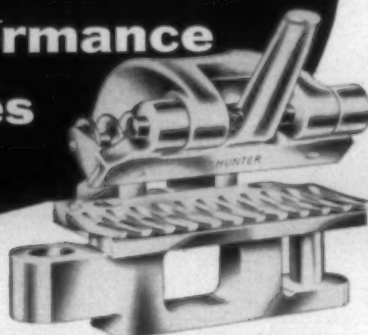
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limited to 300. This conference is one of more than 300 meetings in various fields of management to be conducted during the current fiscal year by the A.M.A. So that conference registrants may do their collective bargaining research at the conference, a special reference room will be set up in the Commodore for the duration of the meeting. Available there for study will be more than 1,000 current labor contracts, classified by union and by industry, and data on wage rates and personnel practices. Members of the A.M.A. research staff and other specialists will be on hand to help industrial relations executives find specific information.

In addition, each participant will receive a work kit designed as a guide to contract negotiations. Especially prepared for the conference, the manual will contain articles on such matters as the guaranteed annual wage, the effect of automation on the industrial work force and current bargaining issues; information on wage rates and personnel practices; classified provisions of collective bargaining agreements; and other selected material dealing with every aspect of the union-management relationship.

Materials Handling Show To Draw 25,000

Advance registrations for the Sixth National Materials Handling Exposition indicate attendance of record-breaking proportions, according to Clapp & Poliak Inc., New York exposition management firm which founded and produces the event. The show, first held in 1947, is one of the largest industrial expositions in the country. It will be held this year at the International Amphitheatre, Chicago, Ill., May 16-20. Preliminary estimates indicate that it will attract well over 25,000 visitors from all over the world. Equipment valued at almost \$10,000,000 will be transported to Chicago for the event and set up for demonstration in simulated factory and warehouse conditions. Approximately 250 companies will exhibit.

For the first time, equipment shown will emphasize systems of materials handling, rather than single pieces of machinery. The displays will be even more varied than in previous years, it is said. The show has been backed by the most costly promotional program ever accorded a single-industry exposition. The last two shows brought visitors from more than 40 countries. Growing interest in automation in the nation's factories is one of the factors attributed to this year's unusually large advance registration. Materials handling is the key to automatic processes. Another major factor is the rapid obsolescence of materials handling equipment. Although the science was not introduced into the nation's factories on a large scale until after World War II, the progress has been so rapid that much of the equipment now in use is already obsolete. The theme of the 1955 show is "The Concept of Obsolescence."

Concurrently with the show, the American Material Handling Society will stage a conference on present-day methods of materials handling. Forty-five leading executives will discuss a total of 29 subjects during the three-day conference sessions. Topics range over a wide field, from warehousing, receiving and shipping, to equipment ownership vs. leasing; from the relationship of materials handling to plant layout, to the subject of integrating handling systems with plant facilities; from the subject of materials handling from origin to destination, to yard, or bulk, handling. Advance registration cards may be obtained from Clapp & Poliak Inc., 341 Madison Avenue, New York 17, N. Y.

Carolinas A.S.Q.C. Names Mangum Chairman

G. Dent Mangum, School of Textiles, North Carolina State College, Raleigh, has been elected chairman of the Carolinas Section of the American Society for Quality Control at the section's recent Spring meeting at Clemson, S. C. Other officers elected included Samuel King, Limestone Mfg. Co., Gaffney, S. C., vice-chairman; Ashley B. Roberts, China Grove (N. C.) Cotton Mills, secretary; H. F. Hunsucker Jr., Highland Cotton Mills, High Point, N. C., treasurer; Eric Weyl, textile consultant, Charlotte, N. C., program chairman; and F. H. Martin, The Springs Cotton Mills, Fort Mill, S. C., co-chairman.

"Techniques of Carding and Spinning Coarse Denier Rayon Staple" was the subject of a talk delivered by William W. Bowman of American Viscose Corp. before the meeting. Mr. Bowman explained that, in speaking of coarse deniers, he was confining his talk to eight and 15-denier staples, since these are currently being used in volume by the tufted carpet industry. "Today over 80 million pounds annually are going into this young, but fast-growing, segment of the textile industry," he said.

Mr. Bowman went into specific techniques on carding and spinning developed by American Viscose as a service to the industry. He emphasized the necessity of a standard method of mill handling of carpet staple to eliminate variations in dye absorption, and he outlined Avisco's recommendations for such processing. He also discussed proper lubrication on the final yarn to aid in the sewing operation, reduce fuzziness of the yarns and help recondition the viscose for moisture content.

"The very coarseness of the eight and 15-denier staple imparts to a finished carpet the resiliency and stiffness that the housewife is looking for in contrast to the finer deniers," Mr. Bowman said. In a tufted carpet, he explained, yarns are sewn into a backing fabric by machines that look like large tricot knitters or just overgrown home sewing machines. The flat bed of needles may be as long as 18 feet on some of the newer, larger machines and as small as six inches wide for experimental use.

Industry Wins Walsh-Healey Round

Victorious in the first formal adjudication of their suit challenging the power claimed by the Secretary of Labor to fix industry wages on a national basis, some 150 textile firms are set to counter legal moves by the United States Government. First case of its kind, the trial in Federal

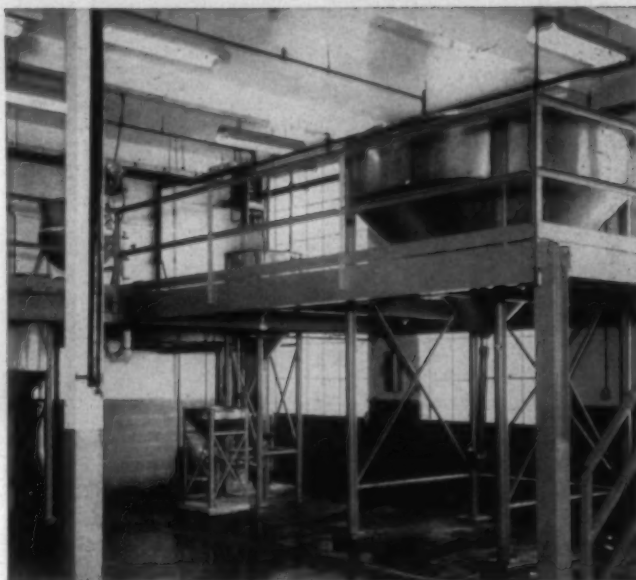


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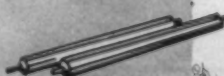
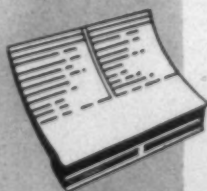
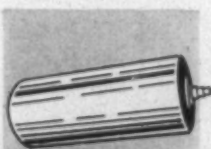
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District Court, Washington, D. C., attracted national attention because it has implications for any industry performing contract work for the Federal Government.

The textile mills won a summary judgment from Judge Alexander Holtzoff. Referring to a minimum textile wage order issued by the late Secretary of Labor Tobin and carried forward by the present Secretary under the public contracts or so-called Walsh-Healey Act, the judge ruled: "The order of the Secretary of Labor is invalid and a contravention of the statute." Government lawyers indicated they might file an appeal with the U. S. Court of Appeals.

It was a second-round win for the 150-odd textile companies because they were granted a temporary injunction against the Secretary of Labor more than two years ago. They contended that the same reasons which brought the restraining order at that time still hold true now—that the Congress never meant to concentrate within one office or one man the authority to fix wages on a national level for an entire industry.

The Walsh-Healey Act provides that when a firm works on government contracts exceeding \$10,000 in value, the Labor Department can determine certain minimum standards which prevail in the firm's locality, so that the work will not be done under sub-standard conditions. The plaintiff textile companies charged that over the years, the Secretary of Labor has arbitrarily and illegally interpreted the word "locality" to mean the entire United States, or an entire industry.

Judge Holtzoff, in handing down his ruling, voiced agreement with the mills' position. To apply the word "locality" to the whole country is a "tortured interpretation" which "distorted the meaning of a simple English word," he said.

During more than two years of litigation and legal maneuvers leading up to Judge Holtzoff's ruling, the textile firms had emphasized the inherent threat posed by government policies which centered wage-fixing authority in one official. Unless this tendency were checked, they contended, all American industry would confront a situation of "wages by administrative edict," as a change in the minimum invariably affects all employee classifications above the minimum and through this device one government officer would find himself with power to dictate all wages.

Such a situation carried to an extreme would amount to the forced abdication of essential managerial prerogatives, the textile firms pointed out. They sought the court ruling against the Secretary of Labor as a necessary means of safeguarding individual freedom of judgment with respect to management decisions in the area of industrial relations.

Salk Polio Vaccine Provided By Cannon

Charles A. Cannon, president of Cannon Mills Co., Kannapolis, N. C., has offered to provide the Salk polio vaccine for a mass inoculation of Cabarrus County children. Ef-

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shots are being made to secure the vaccine for 15,000 children from one year through elementary school age, with inoculations probably to start immediately. An estimate indicated the cost would be \$2.40 a child.

New Yarn Evaluation Method Cited

A new yarn evaluation method which eliminates plying and the use of adhesive was discussed in New York City recently by G. D. Mallory, section head in charge of fabric research for The Goodyear Tire & Rubber Co. Mr. Mallory, addressing the tire cord sub-committee of the American Society for Testing Materials, described how fatigue properties of new and unknown yarns can be evaluated as compared to current and established yarns. He revealed that the new process permits an evaluation with just a few hundred yards of yarn. He also discussed the effect of yarn size and moisture content.

P.T.I. Alumni Schedule Annual Meet

The Alumni Association of the Philadelphia (Pa.) Textile Institute has announced the following plans for its annual business meeting and reunion. The business meeting will be held on Alumni Day on the P.T.I. campus June 9; the reunion will be held June 10 at the Manufacturers' Golf and Country Club, Oreland, Pa., with golf, tennis, baseball and other sports throughout the day and a dinner at 7 p. m.; on June 11 the annual commencement exercises will be held at P.T.I., with the awarding of degrees and honors.

March Actate, Rayon Shipments Hit Peak

United States producers of rayon and acetate staple and yarn shipped a total of 124,700,000 pounds in March, 22 per cent more than February and 17 per cent more than the recent high shipments in December 1954. March shipments, therefore, were the highest monthly shipments on record.

These data were compiled by the *Textile Organon*, statistical bulletin of the Textile Economics Bureau Inc. March shipments consisted of 122,900,000 pounds to the domestic market and 1,800,000 pounds for export. Rayon and acetate shipments in the first quarter of the year amounted to 329,200,000 pounds or 30 per cent greater than shipments in the corresponding period of 1954 and

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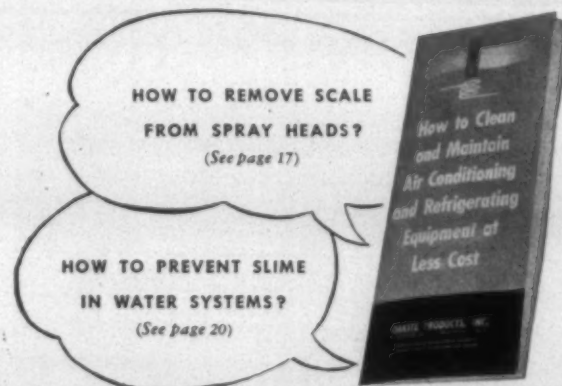
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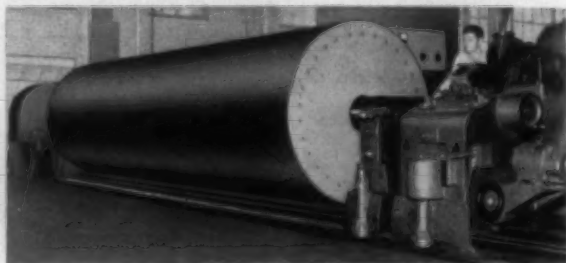
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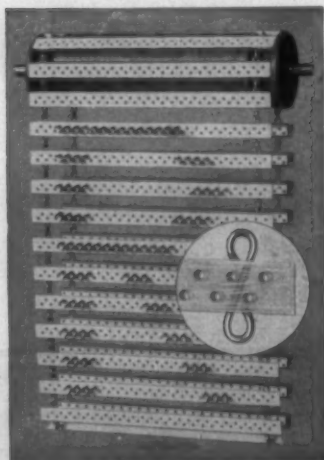


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ten per cent greater than shipments in the first quarter of 1953.

High-tenacity rayon yarn shipments last month totaled 39,100,000 pounds, the largest figure since the middle of 1953. These shipments represented 37,400,000 pounds production and a stock decrease of 1,700,000 pounds. Regular+intermediate tenacity rayon yarn shipments in March, totaling 21,600,000 pounds, was the largest monthly total for the product since July 1951, and was accomplished by a production increase and stock decline.

Acetate yarn shipments at 24,400,000 pounds in March also increased substantially and here, too, production increased and stocks declined. March rayon staple+tow shipments amounted to 30,500,000 pounds, maintaining the high rate of the last several months and producers' stocks declined to less than a two weeks' supply. Acetate staple+tow deliveries totaling 9,100,000 pounds were the largest since the middle of 1953.

January imports of man-made staple, according to the *Organon*, totaled 11,688,000 pounds and consisted of 11,651,000 pounds of rayon staple and 37,000 pounds of non-cellulosic staple. The over-all figure represents a small decline from the record December total of 12,483,000 pounds. During January, France was the largest shipper to the U. S. with a total of 2,290,000 pounds. Next in importance was the United Kingdom with 2,020,000 pounds, West Germany with 2,019,000 pounds, Belgium 1,521,000 pounds, Sweden 691,000 pounds, Austria 660,000 pounds, Norway 653,000 pounds, Italy 626,000 pounds, Cuba 610,000 pounds, Switzerland 559,000 pounds and Canada 2,000 pounds. The average declared value of imported rayon staple remained at 26 cents a pound in January.

The *Organon's* annual study of exports of man-made fibers and manufactures reveals that during 1954 a total of \$215,460,000 worth of such goods were shipped abroad. This represents a decline of two per cent from the 1953 figure but a gain of 4.5 per cent compared with 1952. To highlight the gains registered in exports, the *Organon* notes that in 1939 the value of man-made fibers and manufactures totaled only \$15,288,000.

By using appropriate conversion factors, the *Organon* calculates that total U. S. exports of man-made fibers and products thereof in 1954 represented the equivalent of 185,000,000 pounds of man-made fibers which compares with 163,000,000 pounds in 1953. The 1954 export balance, incidentally, is the largest on record except for 1947 and 1949.

An analysis of exports by individual items shows that shipments overseas of regular+intermediate tenacity rayon and acetate yarns amounted to 6,274,000 pounds, a small gain over 1953. Exports of high-tenacity viscose yarns and tire fabric amounted to 16,207,000 pounds, and the total rayon and acetate yarn and tire fabric exports were 22,481,000 pounds, an increase of 28 per cent over the previous year. Exports of non-cellulosic yarns and monofilaments amounting to 6,361,000 pounds, on the other hand, were down slightly from 1953. Exports in the latter category were mainly nylon.

Shipments abroad of staple, tow, tops, etc., of rayon and acetate totaled 7,218,000 pounds, a gain of 53 per cent compared with 1953. The non-cellulosic fibers in the staple category were exported to the extent of 2,219,000 pounds, a gain of 18 per cent over the previous year. Exports of all man-made fiber, waste, noils, etc., declined

substantially during the year. Exports in 1954 totaled 27,250,000 pounds against 38,305,000 pounds in 1953.

The *Organon* notes that in the important category of broad woven piece goods, there was a small increase in exports during 1954. Exports in 1953 and 1954, respectively, were 199,338,000 square yards and 201,222,000 square yards. In the wearing apparel category, exports of woven dresses and ensembles declined somewhat from 1953 to 1954 and the trend of men's and boys' outerwear also was down. The declining trend continued in the important women's and children's hosiery items in both physical volume and dollar value. In the matter of imports of man-made fibers and manufactures last year, the *Organon* points out that while they declined 13 per cent compared to 1953, the composition of the over-all decline was striking. The value of such goods imported in 1954 totaled \$30,912,000.

There were sizeable gains in the imports of most categories of yarns and monofilaments, waste, fabrics, apparel and other manufactures, with 1954 imports valued at \$14,289,000, a gain of 23 per cent over 1953. This increase, however, was more than offset by the substantial decline in the declared value of man-made staple, tow and tops, which fell from \$24,094,000 in 1953 to \$16,623,000 in 1954, a loss of 31 per cent.

In reviewing the broad woven goods output during 1954 the *Organon* notes that it was characterized by a decline in production from the first through the third quarters in total yardage of cotton, woolen and worsted, man-made fibers and silk. Over-all production last year was 12,282,000,000 linear yards, a decline of five per cent compared with 1953 but up one per cent compared with 1952. Output in the fourth quarter of 1954, amounting to 3,190,000,000 linear yards, was up sharply from the two preceding quarters. Decreases from 1953 to 1954 by major categories were 440,000,000 linear yards or four per cent for cotton, 59,000,000 yards for woolen and worsted fabrics or 17 per cent less, 158,000,000 yards for man-made fiber fabrics or seven per cent less, and 8,000,000 yards for silk and silk mixture fabrics or 21 per cent less.

In cotton goods output, production of print cloth yarn fabrics and wide cotton fabrics during 1954 approximated that of the preceding year; but in all other categories, there were declines ranging from five per cent for both fine cotton goods and towels and similar goods to a 12 per cent decline in colored yarn fabrics.

In the rayon and acetate fabric class, the principal decline was in 100 per cent filament yarn fabrics which showed a loss of 20 per cent compared to 1953. Output of other

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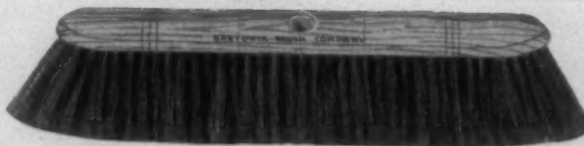
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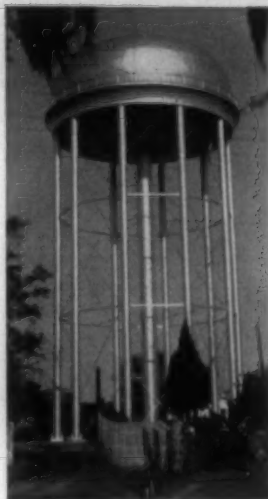
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categories was the same or slightly lower and the over-all decline of this residual group was only five per cent.

Total output of tire cord and fabric during 1954 amounted to 414,000,000 pounds, a decline of 21 per cent from 1953. Consumption, however, was adversely affected by strikes at the plants of two tire manufacturers and it is understood that the tire manufacturers drew down their inventories of tire yarn and fabric during the year. The markedly higher usage in the fourth quarter reflecting production of 1955 automobile models is noteworthy, according to the *Organon*. Nylon cord and fabric increased from 19,000,000 pounds in 1953 to 30,000,000 pounds in 1954, with the gain made largely at the expense of rayon. In the woolen and worsted category, the principal decline was in the non-apparel goods, output of which was off 47 per cent. Production of apparel fabrics was off 13 per cent.

Spinners' Inventories Hold Steady

Carded cotton sales yarn spinners completed March operations with order backlogs equal to 8.80 weeks' production, the Textile Information Service reports. These unfilled orders on spinners' books as of Apr. 2 were 5.53 times stocks on hand. Backlogs on March 5 were equal to 9.64 weeks' output and 6.06 times stocks. At the end of March last year, unfilled orders amounted to 7.81 weeks' production and were 3.45 times stocks on hand. Spinners' inventories, including yarn made for future delivery against unfilled orders, amounted to 1.59 weeks' production on Apr. 2. Stocks were unchanged from the 1.59 weeks' production equivalent on March 5 and at the end of March last year they were equal to 2.26 weeks' output. According to figures compiled by the Carded Yarn Association covering reports from 1.4 million member spindles, production in the week ended Apr. 2 consisted of 34.1 per cent knitting yarn, 35.1 per cent weaving yarn and 30.2 per cent all others. On March 5, the percentages were 32.8, 37.0 and 30.2 respectively.

Wool Consumption & Stocks—Feb. '55

The February rate of fiber consumption on the woolen and worsted systems was four per cent above the January rate and 16 per cent above that of February 1954, according to the Bureau of the Census, Department of Commerce. The weekly average raw wool consumption during January was 8,174 thousand pounds (scoured basis), or four per cent above the January level, and 11 per cent above that of February 1954. The rate of consumption of carpet class wool increased two per cent compared to the previous month and four per cent compared to February 1954. The consumption of apparel class wool rose five per cent from the January level and 14 per cent from that of February of last year. Consumption of fibers other than raw wool averaged 5,344 thousand pounds, or four per cent above the January average, and 24 per cent above the average of February of last year.

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N. Y. C. Gross Receipts Tax Clarified

Legal action challenging the validity of the New York City gross receipts tax as applied to out-of-state mills selling through independent New York sales organizations, undertaken in 1951 by the financial group and 28 member firms of The Association of Cotton Textile Merchants of New York, has been successfully concluded with the city's abatement of the deficiency in tax involved in the test case, the association has announced. The test case, that of Virginia Mills Inc., Swepsonville, N. C., represented by J. W. Valentine Co. Inc., New York, involved a tax deficiency claim of \$5,107.99 under a Dec. 14, 1949, determination of the city. Abatement dated March 11, 1955, has been issued by Morris W. Weiner, special deputy comptroller of the city. Breed, Abbott & Morgan, New York, counsel for the association, represented Virginia Mills in the action.

The Virginia Mills case was one of the first of several similar actions by textile and other firms challenging the business tax. The financial group of the association for 16 years has contested the city's effort to levy such taxes on the mills. In 1947 the group won a concession from the city exempting mills sold through houses which guaranteed customer credits back to the mill. In late 1949 and 1950 the city, however, attempted to collect taxes prior to 1947 from mills which sold through such del credere agents as well as later taxes from those not guaranteeing credits. On May 16, 1951, the 28 affected sales organizations determined on resort to the courts. Virginia Mills was chosen as the test case. Unlike some later cases, it was determined to exhaust all remedies at the local level before appeal to the courts. Thus more than 20 hearings were held before a city conferee, ending in October 1953, with more than 1,000 pages of evidence submitted. Meantime the United Piece Dye Works Case, similar to Virginia Mills, had been carried through the courts with a U.S. Supreme Court decision in its favor. The city's final determination dropping the Virginia Mills case followed this decision and Comptroller's Bulletin 1955-1 interpreting the result.

The satisfactory determination of the position of out-of-state mills will mean large financial savings to a great many textile mills throughout the country. "It is our opinion," Paul L. Peyton of Breed, Abbott & Morgan states, "that under this (Virginia Mills) determination an out-of-state mill which conducts its affairs through a local selling agent within the limits now prescribed by the comptroller's ruling and the decision of the Supreme Court is not taxable under the general business tax law and is not required to file general business tax returns." The gross receipts tax committee of the association's financial group, which has been responsible for this successful effort, consists of Harold R. Elliot, chairman, Wellington Sears Co. Inc.; J. W. Hansen, Iselin-Jefferson Co. Inc.; Lewis M. Heflin, Cone Mills Inc.; William G. Lipsey, Turner Halsey Co. Inc., and Edward M. Fuller, Greenwood Mills. Inc.

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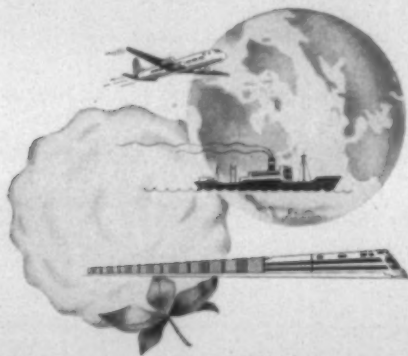
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- 4—Morton 600 lb. capacity Stainless Steel Raw Stock Dye Kettles complete with motor, control equipment, etc.
- 16—Collins 200 spindle Twisters; 3" Rings, 4¼" Pitch, 8" Bobbin Traverse 10" dia. cylinders, 10 HP Motor, etc.
- 21—Globe Ball Warping Frames.
- 23—48, 54 & 60" single Cylinder Worsted Cards.
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WANTED—Position as General Overseer of Carding, Spinning, Twisting and Winding. Experienced all phases of cotton and waste manufacturing including Tube Twists. Some Rayon experience. Capable of directing entire unit. Presently employed; sober; high school education; age 46. Address Box "KS," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED—Overseer carding and/or spinning. Thoroughly experienced in production cotton and blended yarns, single and ply. Good producer. Excellent references. Reply to Box "R. M.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED—Job as second hand in spinning department. Can overhaul or erect. Available to begin work at once. 30 years' experience in spinning. A-1 references. Write to Box "W. D.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED—Position as assistant superintendent or general overseer of weaving. Experienced on box looms and Draper looms, as well as designing. Widely experienced on corduroy, spun rayon, and drapery goods. Presently employed, but desire change. Can furnish references. Available for interview. Write to Box "B. J.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

SUPERINTENDENT AVAILABLE. Experienced in carding and spinning, synthetic, combed and carded yarns. Formerly superintendent of large Southern mill. I. C. S. graduate; age 46; excellent references. Reply to Box "T. R.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED—Position as general overseer of cloth room or sewing room. Experienced on rayons and cottons. A total of 15 years' experience. Can furnish references. Write to Box "D. S.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

Before Closing Down

—TEXTILE INDUSTRY HAPPENINGS AS THIS ISSUE WENT TO PRESS—

PERSONAL NEWS



John Benefield

John Benefield has been appointed sales technician for the textile department of Stein, Hall & Co. Inc., operating from the firm's Atlanta, Ga., office. Mr. Benefield, who for 22 years was associated with Eagle & Phoenix Division of Fairforest Co., Columbus, Ga., will call on finishing plants in Georgia and Alabama.

John C. Franklin, vice-president in charge of the dyestuff and chemical division of General Aniline & Film Corp., has announced his resignation, effective June 1. Mr. Franklin was executive vice-president of General Dyestuff from 1949 until its merger with General Aniline and continued in that capacity, following a merger of the two companies. Mr. Franklin said he has no definite plans beyond the resignation date.

Walter E. (Bud) Eskew has been named technical director of the Blackman-Uhler Co., Spartanburg, S. C. Mr. Eskew was formerly with Southern Bleachery as a chemist from 1930 until 1945. During the past nine years he has been an officer of the Piedmont Chemical Corp. of Charlotte, N. C. In addition to his new post, Mr. Eskew will also act as technical director for the Blackman-Uhler Mfg. Co. which recently started operations in its new plant at Camp Croft, S. C. Blackman-Uhler Co. and Blackman-Uhler Mfg. Co., together with Alliance Color and Chemical Co. and Alliance Chemical Corp., are divisions of The Andover Co.

Two new directors have been elected to the board of Howard Bros. Mfg. Co., Worcester, Mass. They are Arnold W. Englund, general manager, and Jefferson E. Williams, president and treasurer, Johnson & Bassett Inc. Harry C. Coley, chairman of the board and treasurer, and Neal A. Mitchell, president and secretary, were re-elected.

William Howlett Gardner, formerly with the new products division of the National Aniline Division, Allied Chemical & Dye Corp., New York City, is now attached to the chemical sales department of that company. In his new position, Dr. Gardner will be responsible for the preparation of technical literature on National's new chemicals. He will also act as a technical representative in the sale and application of National chemicals. Prior to joining National in 1943, Dr. Gardner was chief of the chemical materials branch, conservation division, War Production Board at Washington, D.C. Prior to that he was research professor of

chemical engineering and supervisor of the Science Research Bureau at the Polytechnic Institute of Brooklyn, N. Y.

Marshall M. Payne, who resigned recently as vice-president and general superintendent of Cannon Mills Inc., Knapolis, N. C., has been named manager of the Durham, N. C., plants of Erwin Mills Inc., succeeding W. V. Byers who has resigned. Mr. Payne had been with Cannon 40 years, becoming general superintendent in 1949. He was elected a vice-president last Spring. Succeeding him as general superintendent at Cannon is Fred L. Wilson, also a vice-president of the company. Mr. Wilson, who joined the company in 1931, was named assistant general superintendent in 1949. Mr. Byers, who had been associated with Erwin 32 years, had been manager of the company's Durham operations about eight years. Prior to that he was assistant manager, a post he assumed in 1934.



L. O. Talley

L. O. Talley has been appointed sales representative for Southern States Equipment Corp. Mr. Talley, whose home is in Mexia, Tex., will represent Southern States in Texas, Oklahoma, Arkansas and Louisiana. He was formerly superintendent of Mexia Textile Mills from 1945 to 1955. Prior to that he had been superintendent of Monticello (Ark.) Cotton Mills.

Saul F. Dribben, president of Cone Mills Inc., New York sales agency for Cone Mills Corp., Greensboro, N. C., has been elected chairman of the board of Cone Mills Inc. A native of New York, Mr. Dribben is also a vice-president and director of Cone Mills Corp. He has been associated with Cone over 60 years, and has been president of the sales agency since 1938. . . Lewis M. Heflin, executive vice-president of Cone Mills Inc., succeeds Mr. Dribben as president. He joined the firm 21 years ago. . . John E. Field, assistant treasurer since 1952, was appointed secretary and treasurer. . . Harvey F. Raymond, who has been with the company since 1935, has been named assistant vice-president.

Alester G. Furman Jr., president of Alester G. Furman Co., Greenville, S. C., has been elected chairman of the board of trustees of Furman University, Greenville.

OBITUARIES

Walter B. Dillard, 58, prominent South Texas industrialist, died recently in New Braunfels, Tex. Mr. Dillard was at one

time vice-president and general manager of New Braunfels Textile Mills and later vice-president and agent for Pomona Mfg. Co., Greensboro, N. C. In late years he had been executive officer for several mills, notably Southern manager for California Cotton Mills, Uniontown, Ala., and executive head of all cotton mills operations of the National Automotive Fibres Co., Detroit, Mich.

Arthur S. Jarrett, 58, general superintendent of Highland Park Mfg. Co., Charlotte, N. C., died April 11 at Charlotte after a long period of declining health. Mr. Jarrett, at one time a member of the board of governors of the Southern Textile Association, had been associated with the Dover Mills group in Shelby, N. C., and was superintendent of Springs Cotton Mills, Chester, S. C., prior to joining Highland Park. He had been general superintendent of Highland Park since 1937. Surviving are his widow, two sisters and two brothers.

John Bynum Merritt, 67, past president of Southern Silk Mills Co., Kernersville, N. C., died April 13 in Greensboro, N. C. Mr. Merritt from 1906 to 1927 worked with Hunter Mfg. & Commission Co. in New York and Chicago. In 1927, he joined Iselin-Jefferson and in 1931 he organized Southern Silk Mills. He is survived by his widow, two sons and a sister.

MILL NEWS

MOORESVILLE, N. C.—Stockholders of Mooresville Mills Inc. have approved a proposal from Burlington Industries Inc. for purchase of the assets of Mooresville under a plan of reorganization. Under the plan, Mooresville will transfer all assets to Burlington in exchange for which Burlington will assume all Mooresville's liabilities and obligations and will transfer to Mooresville 318,349 shares of Burlington common stock. Mooresville stockholders will receive one share of Burlington stock for each two shares of Mooresville stock. Mooresville Mills will be dissolved and liquidated, with the corporate title and name changed to M-M Co. Inc.

ROBBINS, N.C.—Amerotron Corp. is planning to consolidate all administration and accounting here for its four plants in this area, according to Robert L. Huffines Jr., president. The four plants involved are the Robbins, Raeford, Red Springs and Aberdeen plants. Work has begun on an office addition at the Aberdeen plant, he reported, and a \$25,000 addition to the Raeford plant to make room for 36 new jacquard looms is under construction.

CHERRYVILLE, N.C.—Blackwelder Textile Co. Inc. is completing a 10,000-square-foot addition to its plant here to house new

BEFORE CLOSING DOWN

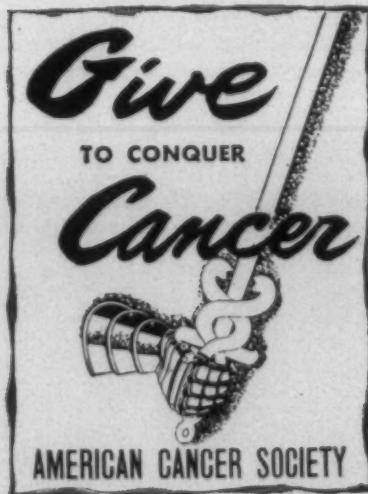
equipment being installed to meet the demands for stretch nylon and other fiber combinations which Blackwelder has developed. The new type yarn is made of stretch nylon and component yarns of cotton, Orlon, Acrilan, wool, rayon, acetate and Dacron. The firm is also installing new machinery to manufacture Flufflon.

EDENTON, N. C. — United Piece Dye Works, Lodi, N. J., has confirmed a report that it is negotiating for a plant site here. The proposed plant would be similar in size and operation to the company's plant at Charleston, S. C., which dyes, prints and finishes synthetics and synthetic blends.

GRACE'S STATION, S. C. — Installation of additional machinery at the finishing plant here of The Springs Cotton Mills has increased capacity to ten million yards a week. New equipment includes a dye range, mercerizing range, plisse range, tenter frame and 75 sewing machines. Work is under way on a three-story building of 180,000 square feet, to warehouse goods finished at the plant.

GREENVILLE, S. C. — Woodside Mills has announced plans for the construction of a warehouse containing 100,000 square feet of space near its plant here. The \$400,000 reinforced concrete building will be erected by Daniel Construction Co., with Lockwood-Greene as engineers. All cotton, synthetic yarn and other raw products will pass through the warehouse before being sent to individual Woodside plants. The company has also announced that it will spend about \$150,000 to modernize its Easley, S. C., plant. The project involves removal of the present ropeway, stairway and elevator tower to provide an additional 11,000 square feet inside the five-story plant. A new elevator shaft and stair tower will be built outside the present walls.

CLEMSON, S. C. — Utica & Mohawk Cotton Mills Division of J. P. Stevens & Co. Inc. has announced plans to build a \$250,000 warehouse here, containing some 93,000 square feet of floor space.



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